

VED0407355A0

D10

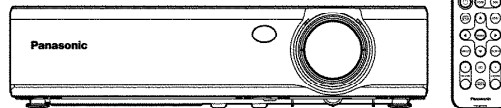
# Service Manual

LCD Projector



PT-LB10SVU / PT-LB10SVE

Please file and use this manual together with the service manual (CD-ROM) for Model No. [PT-LB10SU / LB10SE Order No. VED0404352C0 \(No. BSD04051K0X\)](#).



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## WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

***Please refer to the Operating Instructions in the appendix folder. / [\(Go to Appendix List\)](#)***

# Panasonic

## 1. Points of difference between LB10SU / E and LB10SVU / VE

## 1.1. Specifications

	PT-LB10SU/E(Base Model)	PT-LB10SVU/VE
LCD panel	0.7type (17.78 mm) (aspect ratio: 4:3) with micro lens array	0.7type (17.78 mm) (aspect ratio: 4:3) without micro lens array
Lens	Manual zoom (1-1.2) /Manual focus F1.7-1.9, f 21.5 mm - 25.8 mm	Manual zoom (1-1.2) /Manual focus F2.0-2.3, f 22.0 mm - 26.2 mm
Luminosity	2 000 lm	1 600 lm

## 1.2. Replacement Parts List

### 1.2.1. PT-LB10SVU

Ref. No.	Part Name & Description	PT-LB10SU (Base Model)	PT-LB10SVU	
		Part No.	Part No.	Remarks
5	LIQUID CRYSTAL DISPLAY(R)	L5BDAXN00073	L5BDAXN00058	
6	LIQUID CRYSTAL DISPLAY(G)	L5BDAXN00074	L5BDAXN00059	
7	LIQUID CRYSTAL DISPLAY(B)	L5BDAXN00075	L5BDAXN00060	
-	MODEL NAME PLATE	TBMF570	TBMF618	
-	MODEL NO. LABEL	TBMF573	TBMF620	
24	LENS	TKGF0092	TKGF0093	
35	BUTTON DECORATION BOARD	TKPA75202	TKPA75201-1	
53	CARTON	TPCB57412	TPCB57415	
58	CARRING CASE	TPEP013	TPEP009	
59	INSTRUCTION BOOK	TQBJ0141	TQBJ0156	⚠
-	GUARANTEE CARD (CANADA)	TQDJ18004	----	
-	GUARANTEE CARD (USA)	TQDJ18015-6	TQDJ18025	
72	UPPER COVER	TXFKF99PVNZ	TXFKF99PVPZ	
73	BOTTOM COVER	TXFKF99PXBZ	TXFKF99PXSZ	
75	OPTICAL BLOCK	TXFEC99PXAZ	TXFEC99PXSZ	

### 1.2.2. PT-LB10SVE

Ref. No.	Part Name & Description	PT-LB10SE (Base Model)	PT-LB10SVE	
		Part No.	Part No.	Remarks
3-2	POWER CORD (EUROPE)	K2CM3DR00002	----	
5	LIQUID CRYSTAL DISPLAY(R)	L5BDAXN00073	L5BDAXN00058	
6	LIQUID CRYSTAL DISPLAY(G)	L5BDAXN00074	L5BDAXN00059	
7	LIQUID CRYSTAL DISPLAY(B)	L5BDAXN00075	L5BDAXN00060	
-	MODEL NAME PLATE	TBMF571	TBMF619	
-	MODEL NO. LABEL	TBMF574	TBMF621	
24	LENS	TKGF0092	TKGF0093	
35	BUTTON DECORATION BOARD	TKPA75202	TKPA75201-1	
53	CARTON	TPCB57413	TPCB57416	
58	CARRING CASE	TPEP013	TPEP009	
59	INSTRUCTION BOOK	TQBJ0142	TQBJ0157	⚠
72	UPPER COVER	TXFKF99PVNZ	TXFKF99PVPZ	
73	BOTTOM COVER	TXFKF99PXBZ	TXFKF99PXTZ	
75	OPTICAL BLOCK	TXFEC99PXAZ	TXFEC99PXSZ	

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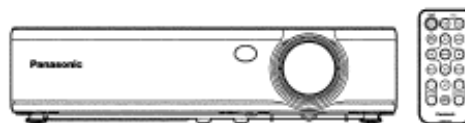
ORDER NO. VED0404352C0

D10

# Service Manual

LCD Projector

- PT-LB10NTU  
PT-LB10NTE  
PT-LB10U  
PT-LB10E  
PT-LB10VU  
PT-LB10VE  
PT-LB10SU  
PT-LB10SE



The service technician is required to read and follow the "Safety Precautions" and "Important Safety Notice" in this service manual.

## Specifications

**Power supply:** 100 V - 240 V AC, 50 Hz / 60 Hz

**Power consumption:**

220 W [During standby (when fan is stopped):  
Approx. 6 W]

**Amps:** 2.5 A - 1.0 A

**AUDIO IN:** Single Line, RCA pin jack × 2 (L-R)  
0.5 V [rms]

**SERIAL:** DIN 8-pin RS-232C compatible

**Cabinet:**

Molded plastic (PC/ABS)

**Dimensions:**

## LCD panel:

Panel size (diagonal): 0.7 type (17.78 mm)  
 Aspect ratio: 4:3  
 Micro lens array: Available  
 Display method: 3 transparent LCD panels (RGB)  
 Drive method: Active matrix method  
 Pixels:  
 PT-LB10NTU/E, LB10U/E, LB10VU/E:  
 786 432 (1 024 × 768) × 3 panels  
 PT-LB10SU/E: 480 000 (800 × 600) × 3 panels

## Lens:

Manual zoom (1 - 1.2) / Manual focus  
 PT-LB10NTU/E, LB10U/E, LB10SU/E:  
 F 1.7 - 1.9, f 21.5 mm - 25.8 mm  
 PT-LB10VU/E:  
 F 2.0 - 2.3, f 22.0 mm - 26.2 mm

**Lamp:** UHM lamp (155 W)

## Luminosity:

PT-LB10NTU/E, LB10U/E, LB10SU/E: 2 000 lm  
 PT-LB10VU/E: 1 600 lm

## Scanning frequency (for RGB signals):

Horizontal scanning frequency: 15 kHz - 91 kHz  
 Vertical scanning frequency: 50 Hz - 85 Hz  
 Dot clock frequency: 100 MHz or less

## YPbPr signals:

480i, 480p, 576i, 576p, 1 080/60i, 1 080/50i, 720/60p

## Color system:

7 (NTSC / NTSC 4.43 / PAL / PAL-M / PAL-N / PAL60 / SECAM)

**Projection size:** 838.2 mm - 7 620 mm

## Throw distance:

PT-LB10NTU/E, LB10U/E, LB10SU/E: 1.1 m - 10.7 m  
 PT-LB10VU/E: 1.1 m - 11.0 m

## Dimensions:

Width: 297 mm  
 Height: 73 mm  
 Length: 210 mm (without lens cover)

## Weight:

PT-LB10NTU/E: 2.2 kg  
 PT-LB10U/E, LB10VU/E, LB10SU/E: 2.1 kg

## Operating environment:

Temperature: 0° C - 40° C  
 (when FAN CONTROL is set to "HIGH" 0° C - 35° C)  
 Humidity: 20 % - 80 % (no condensation)

## Certifications:

PT-LB10NTU/LB10U/LB10VU/LB10SU:  
 UL60950, C-UL, FCC Class B  
 PT-LB10NTE/LB10E/LB10VE/LB10SE:  
 EN60950, EN55022, EN61000-3-2,  
 EN61000-3-3, EN55024

## <Remote control unit>

## Power supply:

3 V DC (Lithium CR2025 battery × 1)

## Operating range:

Approx. 7 m  
 (when operated directly in front of signal receptor)

## Dimensions:

Width: 40 mm  
 Height: 86 mm  
 Length: 6.5 mm

**Weight:** 18 g (including battery)

## Accessories:

**Card Remote control unit (TNQE239):** 1

**Lithium battery for remote control unit (CR2025) :** 1

## Power cord:

PT-LB10NTU/LB10U/LB10VU/LB10SU:  
 K2003000005



PT-LB10VU/E: 1.1 m - 11.0 m

**Optical axis shift:** 6:1 (fixed)**Screen aspect ratio:** 4:3**Installation:**

Front / Rear / Ceiling / Desk (Menu selection method)

**Speakers:** 4.0 cm × 3.0 cm oval × 1**Max. useable volume output:**

1 W (monaural)

**Connectors:****RGB IN / OUT:** Dual-line, one for input and one for output  
D-SUB HD 15-pin (female)

During YPBPR input/output:

Y: 1.0 V [p-p], 75 Ω

PBPR: 0.7 V [p-p], 75 Ω

During RGB input/output:

RGB: 0.7 V [p-p], 75 Ω

G.SYNC: 1.0 V [p-p], 75 Ω

HD / SYNC: TTL, automatic positive/negative polarity  
compatibleVD: TTL, automatic positive/negative polarity  
compatible**VIDEO IN:** Single-line, RCA pin jack  
1.0 V [p-p], 75 Ω**S-VIDEO IN:** Single-line, Mini DIN 4-pin  
Y 1.0 V [p-p], C 0.286 V [p-p], 75 Ω,

K2CG3DR00005

PT-LB10NTE/LB10E/LB10VE/LB10SE:

K2CT3DR00005 (U.K)

K2CM3DR00002 (continental)

**RGB signal cable [K1HA15DA0002 (1.8 m)]:****CD-ROM (TQBH9005) (LB10NTU/E only)****Wireless Card (N5HBD0000028) (LB10NTU only)**

(N5HBD0000029) (LB10NTE only)

(N5HBD0000031) (for Spain)

(N5HBD0000030) (for Singapore)

(N5HBD0000028) (for Malaysia)

**Hexagon wrench (TKLA0701) (LB10NTU/E only)****Carrying bag (TPEP013):****Options:****Ceiling bracket:** ET-PKC80**Wireless remote control unit:** ET-RM300**Serial adapter (DIN 8-pin/D-sub 9-pin):** ET-ADSER**Wireless card (for PT-LB10NTU/E):**

ET-CDWL3U/ET-CDWL2U (for North America)

ET-CDWL3E/ET-CDWL2E

(for U.K., Continental Europe except Spain)

ET-CDWL3ES/ET-CDWL2ES (for Spain)

ET-CDWL3SG/ET-CDWL2SG (for Singapore)

ET-CDWL3U/ET-CDWL2U (for Malaysia)

- Specifications are subject to change without notice.
- Weight and dimensions shown are approximate.

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**⚠ WARNING**

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# 1 Safety Precautions

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[1.1 General Guidelines](#)

[1.2 Leakage Current Check](#)

[1.3 UV Precaution and UHM Lamp Precautions](#)

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# 1.1 General Guidelines

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- For continued safety, no modification of any circuit must be attempted.
- Unplug the power cord from the power outlet before disassembling this projector.
- It is advisable to use an isolation transformer in the AC power line before the service.
- Observe the original lead dress during the service. If a short circuit is found, replace all the parts overheated or damaged by the short circuit.
- After the service, all the protective devices such as insulation barriers, insulation papers, shields, and isolation R-C combinations must be properly installed.
- After the service, check the leakage current to prevent the customer from getting an electric shock.

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# 1.2 Leakage Current Check

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1. Prepare the measuring circuit as shown in Fig.1.

Be sure to use a voltmeter having the performance described in Table 1.

Fig. 1

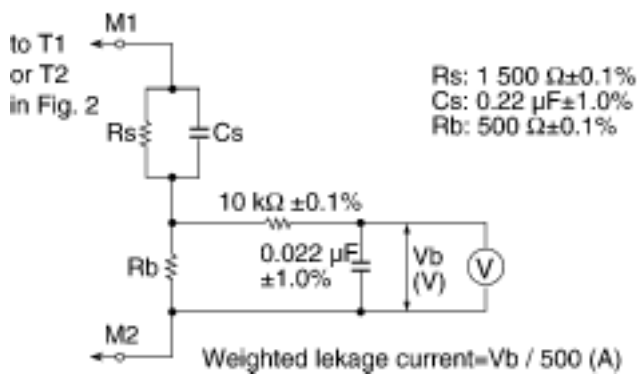
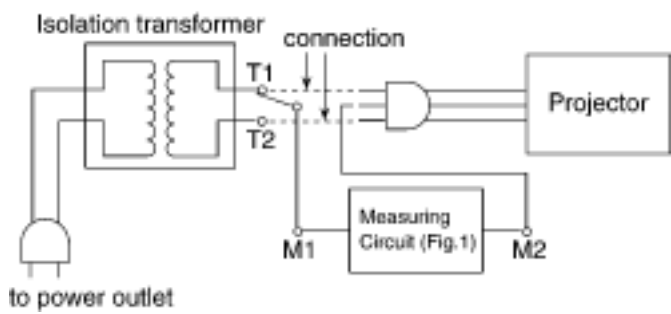


Table 1

	Performance
Voltmeter (rms reading)	Accuracy: $\leq 2\%$
	Input resistance: $\geq 1\,M\Omega$
	Input capacitance: $\leq 200\,pF$
	Frequency range: 15 Hz to 1 MHz

Fig. 2



- 2. Assemble the circuit as shown in Fig. 2. Plug the power cord in a power outlet.
- 3. Connect M1 to T1 according to Fig. 2 and measure the voltage.
- 4. Change the connection of M1 from T1 to T2 and measure the voltage again.

5. The voltmeter must read 0.375 V or lower in both of steps 3 and 4. This means that the current must be 0.75 mA or less.
6. If the reading is out of the above standard, the projector must be repaired and rechecked before returning to the customer because of a possibility of an electric shock.

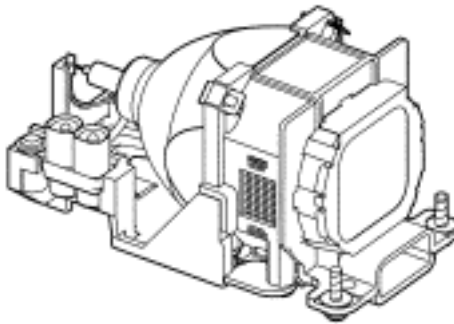
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# 1.3 UV Precaution and UHM Lamp Precautions

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- Be sure to unplug the power cord from the power outlet when replacing the lamp.
- Because the lamp reaches a very high temperature during its operation, wait until it cools completely when replacing the Lamp Unit.
- The lamp emits small amounts of UV-radiation, avoid direct-eye contact with the light.
- Because the high pressure lamp involves a risk of explosion, never touch the lamp wire lead during the service. (See Fig. 3)

Fig.3



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# 2 Ext Option

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This projector has EXT OPTION in addition to standard on-screen menus.

- There are SELF CHECK and SERVICE MODE for service, etc.

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[2.2 EXT OPTION Menu and Functions](#)

[2.3 Canceling EXT OPTION](#)

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## 2.1 Procedure to enter EXT OPTION

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1. Press "MENU" button on the main unit or remote control unit to display "MENU" screen, then select "OPTION1" and press "ENTER" button.
2. Select "OSD" on "OPTION1" menu and press "ENTER" button 3 seconds or longer.

MENU → OPTION1 → OSD

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## 2.2 EXT OPTION Menu and Functions

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### EXT OPTION

FREEZE MSG	OFF / ON
ANGLE RESET	OFF / ON
FAN FULLMODE	OFF / ON
AUTO SETUP	STANDARD / SPECIAL
SELF CHECK	
SERVICE MODE	
FLICKER ADJ	

- FREEZE MSG

Switching ON/OFF "FREEZE" on-screen display

- ANGLE RESET

Switching ON/OFF "AUTO KEYSTN (Automatic Keystone)" reference level setting

**Note:**

- Normally, do not select. (Angle reset data will be rewritten.)

- FAN FULLMODE

Setting the cooling fan motor rotation speed

- Switching ON "FAN FULLMODE", the rotation level of the fan becomes high-speed rotation (fixed). Moreover, when "FAN FULLMODE" is ON, changing "FAN CONTROL" in OPTION2 becomes impossible (setting FAN FULLMODE is given priority more than FAN CONTROL).

- AUTOS SETUP

Setting AUTO SETUP mode

- STANDARD: To set the normal mode (the dot clock is adjusted strictly))
- SPECIAL: To set the special mode (the dot clock is adjusted roughly)

Note:

- Do not change the initial setting (STANDARD).

- SELF CHECK

To enter the self-check mode

- SERVICE MODE

To enter the service mode

- FLICKER ADJ

To enter the flicker adjustment mode

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## 2.3 Canceling EXT OPTION

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Press "MENU" button on the main unit or remote control unit.

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# 3 Self-Check Mode

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This mode is used to narrow down the location of the failure.

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# 3.1 Procedure to enter the self-check mode

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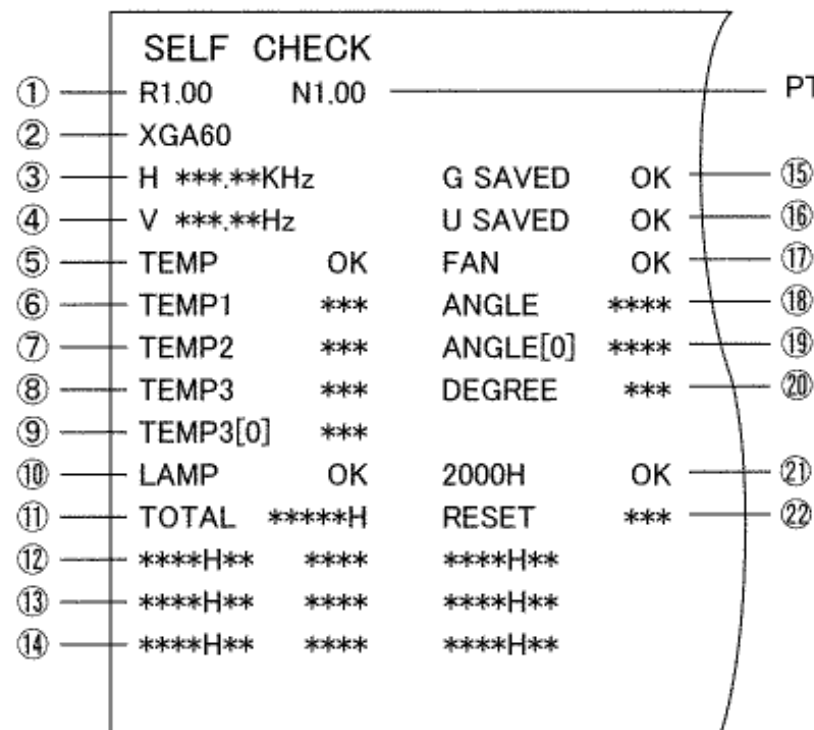
Select "SELF CHECK" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

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## 3.2 Self Check Display and Contents

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Display example



\* This display is an example and the display contents depend on the input signal mode.

• The result of items "G SAVED" and "U SAVED", "OK" is displayed for OK and "NG" is displayed for NG.

• The result of items "TEMP", "FAN", "LAMP" and "2000H", the OK display becomes red characters when shutting down because abnormality happened last time.

	Display Contents	Remarks
①	Microcomputer Version Display	Software Version
②	Resolution Name	Different display according to the input signal
③	Horizontal Signal Frequency	RGB or YP <sub>B</sub> P <sub>R</sub> signal reception only
④	Vertical Signal Frequency	
⑤	Temperature Abnormality Check	Cause of Lamp Malfanction
⑥	Thermosensor 1 Measurement Value *1	Around Air Outlet (A/D conversion value: 0 - 255)
⑦	Thermosensor 2 Measurement Value *1	Around Air Inlet (A/D conversion value: 0 - 255)
⑧	Thermosensor 3 Measurement Value	Around Tilt Sensor (A/D conversion value: 0 - 1 023)

⑨	Thermosensor 3 Reference Value	Thermosensor 3 A/D Conversion Value (0 - 1 023) at angle reset	
⑩	Lamp - Abnormality Check	Cause of Lamp Malfunction	
⑪	Total Usage Time	Projector Cumulative Usage Time	
⑫	Lamp ON - Cumulative Usage Time / Frequency / Cumulative Usage Time	Current	Cumulative Usage Time (actual time), ON Frequency and Cumulative Usage Time (conversion time for 155 W) of the lamp are shown from the left.
⑬		Second	
⑭		First	
⑮	Gamma Correction Data Check	It is distinguished whether gamma data is stored in the flash ROM.	
⑯	Color Unevenness Correction Data Check	It is distinguished whether color unevenness correction data is stored in the flash ROM.	
⑰	Fan Stop Check	Cause of Lamp Malfunction	
⑱	Tilt Sensor Measurement Value	Voltage Value (0.00 - 3.30)	
⑲	Tilt Sensor Reference Value	Tilt Sensor Voltage Value (0.00 - 3.30) at angle reset	
⑳	Tilt Degree *2	Degree of tilt of the projector, that is a value by which temperature correction is given to the tilt sensor A/D conversion value. (When automatic keystone, the keystone distortion is corrected with this value.)	
㉑	Lamp - Judgment for Cumulative Usage more than 2 000 h *3	Judgment for Replacement Time of Lamp	
㉒	Lamp - Reset Frequency of Cumulative Usage Time	Reset Frequency (0 - 255)	

\*1 When detected abnormal temperature (high temperature around the air inlet and/or outlet ports, large difference between temperature around the air inlet/outlet ports), TEMP indicator turned on. If arriving at the critical temperature, the power supply will be shutdown automatically and the indicator will flash.

\*2 When "AUTO KEYSTN (Automatic Keystone)" is set to ON, the keystone distortion is corrected automatically with this value during automatic setup.

\*3 Warning of the lamp cumulative usage time and shutdown use the conversion time for 155 W.





## 3.3 Canceling the self-check mode

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Press "MENU" button on the main unit or remote control unit.

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# 4 Service Mode

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This mode is used to display seven kinds of test patterns [Horizontal lines, Vertical lines, Dots, Crosshatch, White cross, Black cross and White (No pattern)] in the four colors (White, Red, Green and Blue)..

## Note:

- On the service mode, displays above patterns by each color without test equipment such as PC or SG. Use the service mode for simplified adjustments by your eyes and so on.

[4.1 Procedure to enter the service mode](#)

[4.2 Canceling the service mode](#)





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# 4.1 Procedure to enter the service mode

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Select "SERVICE MODE" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

Note:

- In the service mode, pressing the up-arrow "" or down-arrow "" button allows the test pattern selection and the left-arrow "" or right-arrow "" button the color selection (White / Red / Green / Blue).

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## 4.2 Canceling the service mode

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Press "MENU" button on the main unit or remote control unit.

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# 5 Flicker Adjustment Mode

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If replacing the optical parts (Analysis / LCD / Lens block) of this projector and/or A-P.C.Board (assembly), enter the flicker adjustment mode and minimize the flicker.

[5.1 Procedure to enter the adjustment mode](#)

[5.2 Adjustment Display and Contents](#)

[5.3 Canceling the flicker adjustment mode](#)

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# 5.1 Procedure to enter the adjustment mode

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Select "FLICKER ADJ" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

Note:

"DESK setting (blue)" is displayed when entering the adjustment mode.



Adjustment Display when DESK setting

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## 5.2 Adjustment Display and Contents

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- Setting value is increased and decreased with the right-arrow "➡" and left-arrow "⬅" buttons.  
 "➡": Increase  
 "⬅": Decrease, "  
 "⬅": Increase
  - Adjust the setting value to minimize the flicker on the screen.
  - Execute the adjustment by 6 patterns below.
- The pattern (adjustment display) is switched with the up-arrow "⬆" and down-arrow "⬇" buttons.  
 "⬆": Forward direction, "  
 "⬇": Reverse direction
  - There are 6 patterns of "DESK setting (blue)", "DESK setting (red)", "DESK setting (green)", "CEILING setting (blue)", "CEILING setting (red)" and "CEILING setting (green)".
  - The setting value is saved into this projector when the pattern is switched.

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## 5.3 Canceling the flicker adjustment mode

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Press "MENU" button on the main unit or remote control unit.

### Note:

When "MENU" button is pressed, the setting value at that time is saved into this projector and the adjustment mode is canceled.

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# 6 Using the SERIAL Connector

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The serial connector which is on the back connector panel of the projector conforms to RS-232C standard. This projector can be controlled by a PC which is connected as shown in "6.1. Connection".

For controlling this projector by a PC, requires communication software on the market, and inputs control commands according to communication settings and basic format below.

[6.1 Connection](#)

[6.2 Pin Layout and Signal Names for SERIAL Connector](#)

[6.3 Communication Settings](#)

[6.4 Basic Format](#)

[6.5 Control / Query Commands](#)

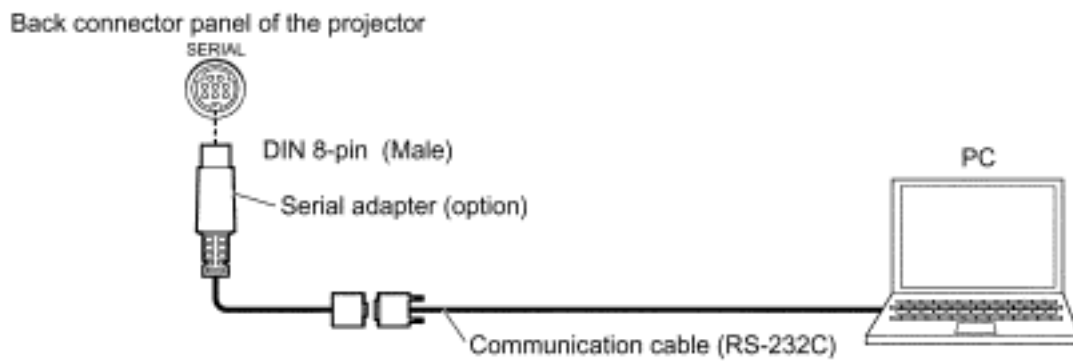
[6.6 Communication Cable Specifications](#)

[6.7 Signal Selector Connecting Cable Specifications](#)

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# 6.1 Connection

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Note:

Use a proper communication cable which is suitable for the PC to connect the optional serial adapter, which is connected with SERIAL connector of this projector, and the PC.

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# 6.2 Pin Layout and Signal Names for SERIAL Connector

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Pin No	Signal Name	Contents
3	RXD	Receive data
4	GND	Ground
5	TXD	Transmit data
1	---	
2	---	Connected internally
6	---	
7	---	NC
8	---	NC

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# 6.3 Communication Settings

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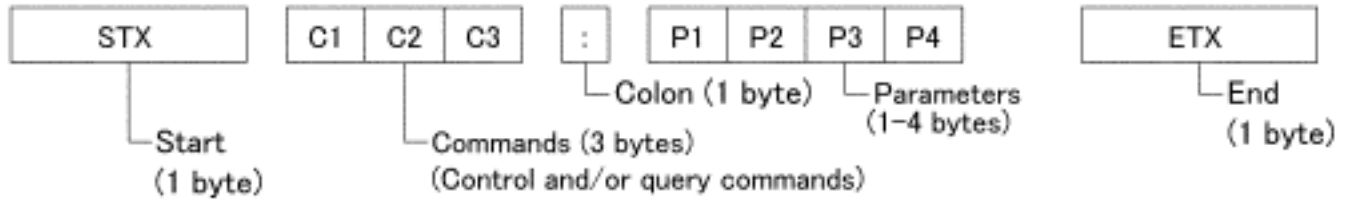
Signal Level	Contents		Description
Sync. method		Asynchronous	Synchronizes every 1 character (8 bits)
Baud rate	Conforms to	9 600 bps	Data transfer speed
Parity	RS-232C	None	Error detection method
Character length	standard	8 bits	Number of bit composing 1 character
Stop bit		1 bit	Uses stop bit when asynchronous method
X parameter		Not used	
S parameter		Not used	

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## 6.4 Basic Format

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The data sent from the PC to the projector is transmitted in the format shown below.



### Notes:

- If sending multiple commands, check that a call back has been received from the projector for 1 command before sending the next command.
- When a command which does not require parameters is sent, the colon (:) is not required.

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# 6.5 Control/ Query Commands

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## Control Commands

Command Name (Parameter format is shown in <>)	Function / Contents	Call back from Projector (Parameter format is shown in <>)	Minimum Value of Parameter	Maximum Value of Parameter
PON *1	POWER ON	PON	—	—
POF *1	POWER OFF	POF	—	—
AVL : <pl>	VOLUME	AVL : <pl>	0	63
IIS : <input signal>	INPUT SELECT	IIS : <input signal>	—	—
OST	STANDARD	OST	—	—
OFZ : <off_on>	FREEZE	OFZ : <off_on>	0	1
OEN :	ENTER	OEN	—	—
VPM : <picture mode>	PICTURE MODE	VPM : <picture mode>	—	—
<NAT>	NATURAL	<NAT>	—	—
<STD>	STANDARD	<STD>	—	—
<DYN>	DYNAMIC	<DYN>	—	—
<BBD>*2	BLACK-BD	<BBD>	—	—
AUU	VOLUME UP	AUU		
AUD	VOLUME DOWN	AUD		
OMN	MENU	OMN		
OCU	CURSOR UP	OCU		
OCD	CURSOR DOWN	OCD		
OCL	CURSOR LEFT	OCL		
OCR	CURSOR RIGHT	OCR		
OAS	AUTO SETUP	OAS		
OSH *1	SHUTTER	OSH		
OIX	INDEX WINDOW (Double)	OIX		
DZU	D.ZOOM UP	DZU		
DZD	D.ZOOM DOWN	DZD		
OLP : <lamp power> *1 *3	LAMP POWER	OLP : <lamp power>	0	1

\*1 Do not transmit the PON, POF, OSH and/or OLP commands continuously in a short time.

The lamp may be damaged and/or cause malfunctions.

\*2 The BBD parameter is non-correspondence to PT-LB10VU/E.

\*3 The OLP command is invalid at a no signal.

## Query Commands

Query Command	Contents	Call back from Projector (Parameter format is shown in < >)
QPW	POWER CONDITION	<power condition>
QIN	INPUT SIGNAL	<input signal>
QAV	VOLUME LEVEL	<pl>
QVC	COLOR LEVEL	<pl>
QVT	TINT LEVEL	<pl>
QVB	BRIGHT LEVEL	<pl>
QVR	CONTRAST LEVEL	<pl>
QVS	SHARPNESS LEVEL	<pl>
QWR	WHITE BALANCE LEVEL (RED)	<pl>
QWG	WHITE BALANCE LEVEL (GREEN)	<pl>
QWB	WHITE BALANCE LEVEL (BLUE)	<pl>
QHP	H-POSITION LEVEL	<pl>
QVP	V-POSITION LEVEL	<pl>
QCP	COLOR PHASE LEVEL	<pl>
QDC	DOT CLOCK LEVEL	<pl>
QSP	INSTALLATION	<installation>
QLG	LANGUAGE	<language>
QPM	PICTURE MODE	<NAT>=NATURAL <STD>=STANDARD <DYN>=DYNAMIC <BBD>=BLACK-BD *
QFZ	FREEZE	<off_on>
QLP	LAMP POWER	<lamp power>
Q\$L	LAMP ON TIME	<acctch>
QSH	SHUTTER	<off_on>
QKS	KEystone	<pl>
QTE	COLOR TEMPERATURE	<color temp.>

\* The BBD parameter is non-correspondence to PT-LB10VU/E.

## Parameters

Parameter Format	Parameter Size (Byte)	Parameter Definition
<pl>	3 (provided that approves of 1 byte or 2 bytes when control)	Decimal notation without plus/minus sign (0 to 999), Decimal notation with plus/minus sign (-99 to +99) (Returns 3 bytes call back from the projector. Decimal notation without plus/minus sign (000, 001, 002, ..., 999), Decimal notation with plus/minus sign (-99, -98, ..., -01, +00, +01, ..., +99) )
<off_on>	1	0=OFF, 1=ON
<input signal>	3	VID=VIDEO, SVD=S-VIDEO, RG1=RGB1, NWP = NETWORK (PT-LB10NTU/E only)
<installation>	1	0=FRONT/DESK, 1=REAR/DESK, 2=FRONT/CEILING, 3=REAR/CEILING
<language>	3	ENG=English, DEU=German, FRA=French, ESP=Spanish, ITA=Italian, JPN=Japanese, CHI=Chinese, KOR=Korean, RUS=Russian
<power condition>	3	000=Power OFF, 001=Power ON
<acctch>	4	Decimal notation without plus/minus sign: 0000 hour to 9999 hours
<lamp power>	1	0=LOW, 1=HIGH
<color temp.>	1	0=LOW, 1=STD, 2=HIGH

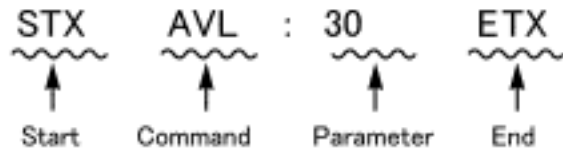
\* If an incorrect command is sent from the PC, the "ER401" command will be sent from the projector to the PC.



[\[Example\]](#)

When controls the audio volume to +30 by a PC

(Sends commands as the following:)

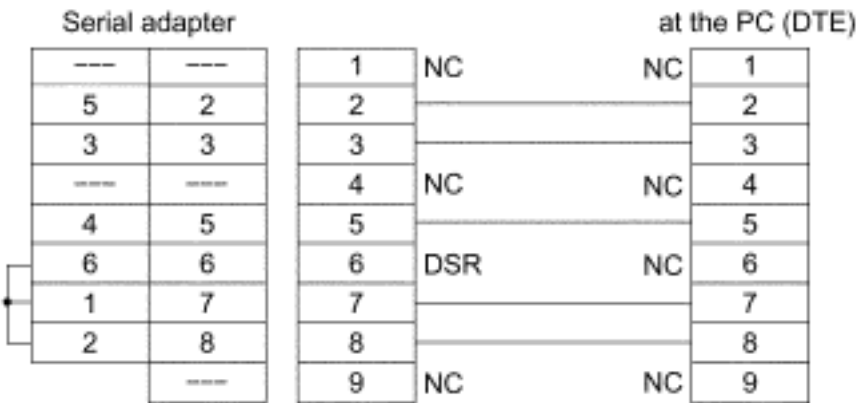


- When a command which does not require parameters is sent, the colon (:) is not required.

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# 6.6 Communication Cable Specifications

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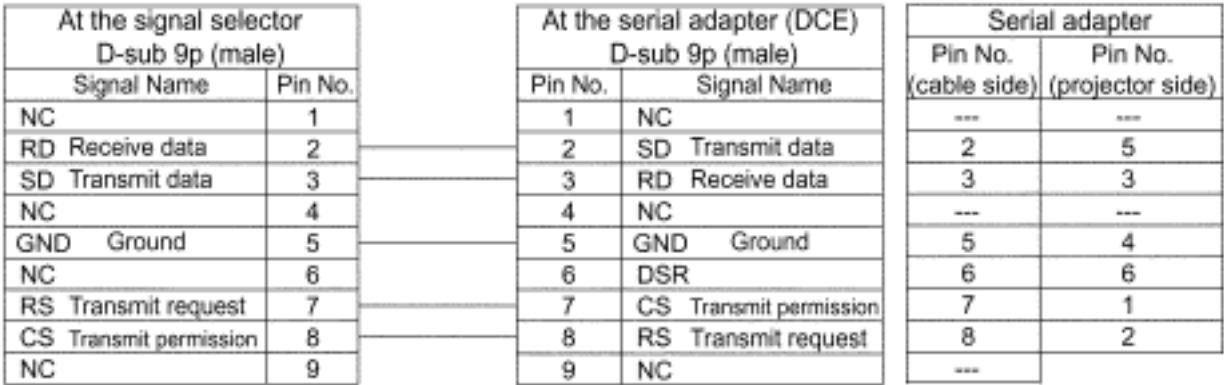
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# 6.7 Signal Selector Connecting Cable Specifications

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When connecting to a signal selector (ex. TW-SWS62J), use a cable with specifications below.

Connecting method: Connects a video signal cable from the signal selector to "VIDEO IN", and an RGB signal cable to "RGB1 IN".



Note:

Set VP control terminal switch of the signal selector to VP TYPE "B".

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# 7 Disassembly Instructions

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## Warning:

- Be sure to unplug the power cord from the power outlet before disassembling this projector.

## Caution:

- While turning over a printed circuit board, be sure to put a insulating material under it to prevent a short circuit.
- Printed circuit boards and wires must not be pulled forcibly, but be handled carefully.
- Connectors also must be handled carefully.
- After repairing this projector, be sure to put back the wires and connectors to the original condition.

### [7.1 Printed Circuit Board and Main Parts Location](#)

### [7.2 Removal of Upper Case](#)

### [7.3 Removal of A-P.C.Board](#)

### [7.4 Removal of WL-P.C.Board \(PT-LB10NTU / E only\)](#)

### [7.5 Removal of S1-P.C.Board](#)

### [7.6 Removal of S2-P.C.Board](#)

### [7.7 Removal of K-P.C.Board](#)

### [7.8 Removal of B / Q-Module](#)

### [7.9 Removal of P-Module](#)

### [7.10 Removal of Lamp Unit](#)

[7.11 Removal of Analysis Block and Lens](#)

[7.12 Removal of LCD Block](#)

[7.13 Replacement of LCD Panel](#)

[7.14 LCD Panel Discrimination](#)

[7.15 LCD Panel Combination](#)

[7.16 Replacement of Incidence Polarizer](#)

[7.17 Replacement of Projection Polarizer](#)

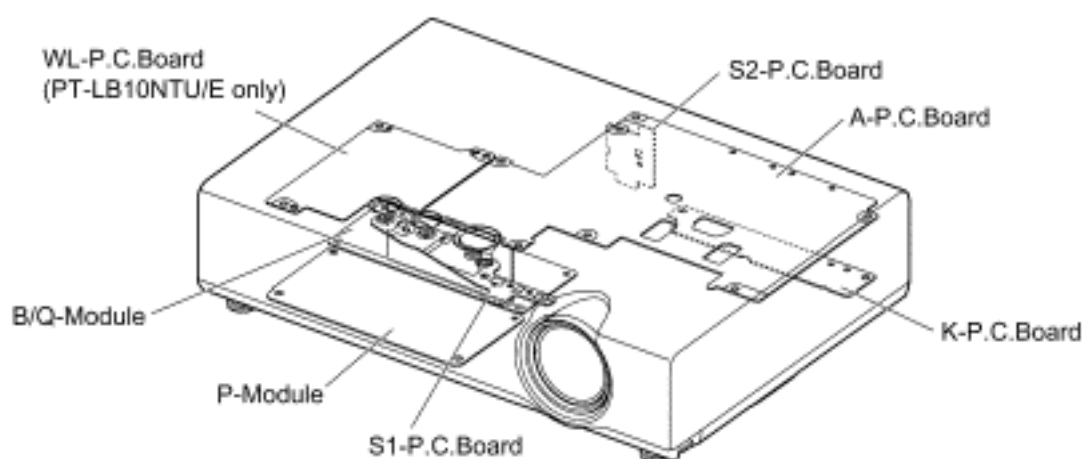
[7.18 Replacement of PBS Array \(Analysis Block\)](#)

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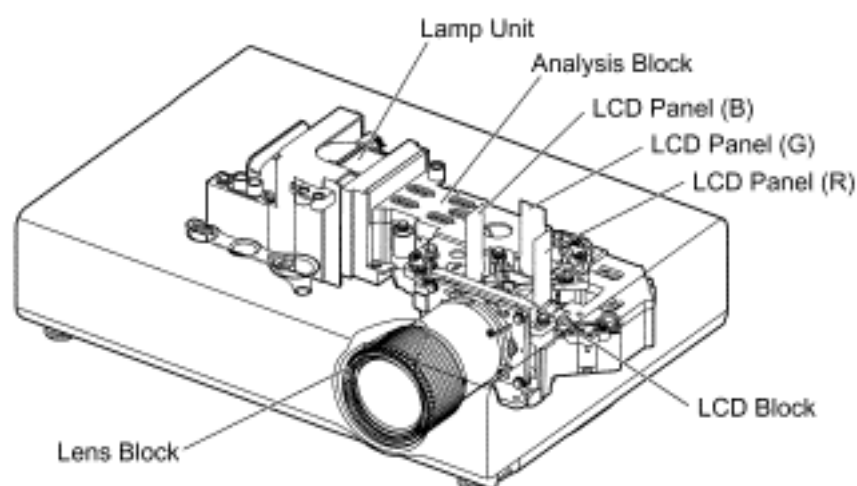
# 7.1 Printed Circuit Board and Main Parts Location

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## Electrical Parts



## Optical Parts



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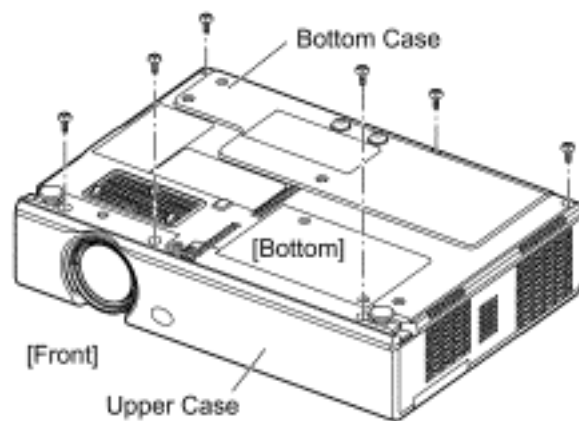
## 7.2 Removal of Upper Case

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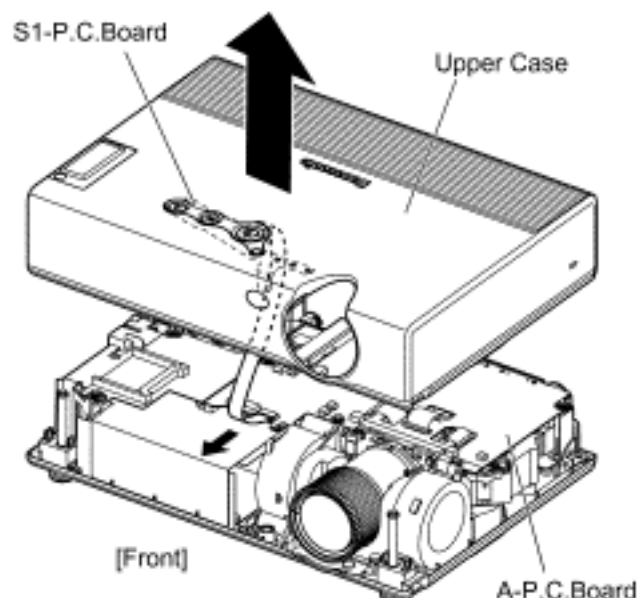
Note.

- For PT-LB10NTU/E, remove a wireless card before disassembling.

1. Turn the projector upside down.
2. Unscrew the 6 screws.



3. Return the projector to the normal position.
4. Lift the upper case upward (approx. 10 cm).
5. Disconnect the cable from S1-P.C.Board (connector A8 on A-P.C.Board) and remove the upper case.



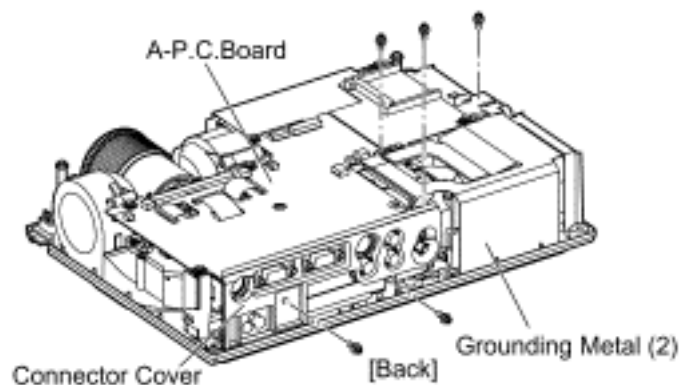
[TOP](#) [PREVIOUS](#) [NEXT](#)



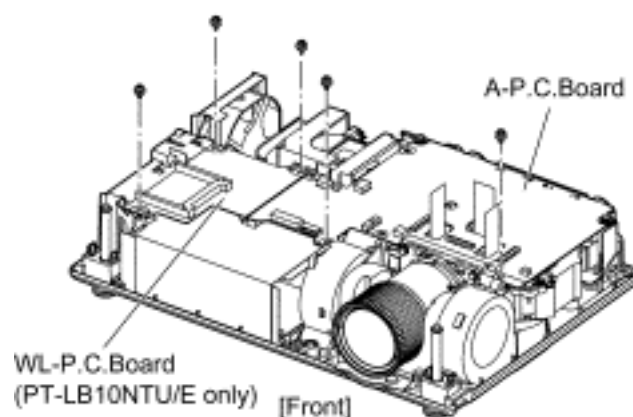
## 7.3 Removal of A-P.C.Board

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1. Remove the upper case according to the section 7.2. "Removal of Upper Case".
2. Unscrew the 1 screw on the backside and remove the connector cover.
3. Unscrew the 1 screw fixing the connector metal fittings on the backside.
4. Unscrew the 3 screws and remove the grounding metal (2).



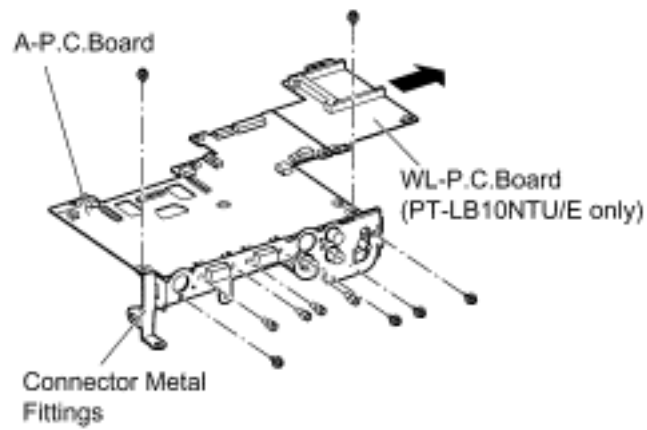
5. Disconnect the connectors from/to the A-P.C.Board.
6. Unscrew the screws (PT-LB10NTU/E: 5, Others: 2) and remove the A-P.C.Board block (PT-LB10NTU/E: with WL- and S2-P.C.Boards, Others: with S2-P.C.Board).



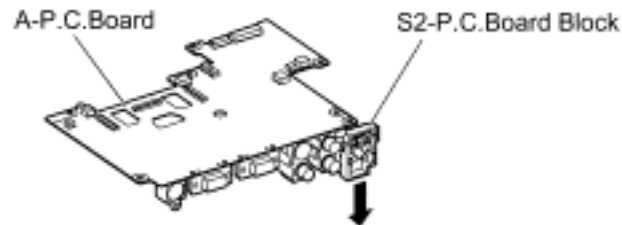
7. While disconnecting the 2 connectors, remove the WL-P.C.Board from the A-P.C.Board block (PT-LB10NTU/E only).
8. Unscrew the 10 screws and remove the connector metal fittings.

**Note:**

- Because the S2-P.C.Board block is attached, work carefully when removing the connector metal fittings.



9. While disconnecting the connector between A- and S2-P.C.Boards, remove the S2-P.C.Board block.



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## 7.4 Removal of WL-P.C.Board (PT-LB10NTU/E only)

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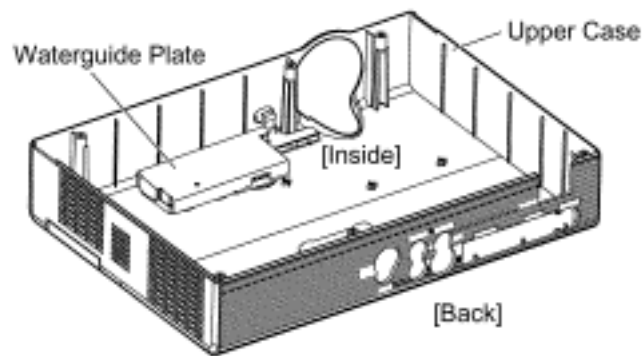
Remove the WL-P.C.Board according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".

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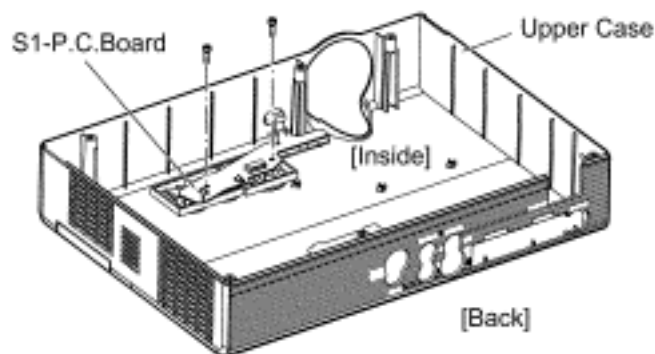
## 7.5 Removal of S1-P.C.Board

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1. Remove the upper case according to the section 7.2. "Removal of Upper Case".
2. Remove the water guide plate.



3. Unscrew the 2 screws and remove the S1-P.C.Board.



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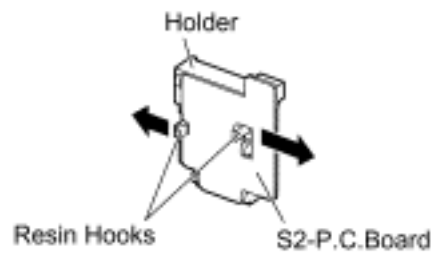
## 7.6 Removal of S2-P.C.Board

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1. Remove the S2-P.C.Board block according to the section 7.3. "Removal of A-P.C.Board".
2. Remove the holder while expanding the resin hooks outside.

**Note:**

- Work carefully not to damage the resin hook.

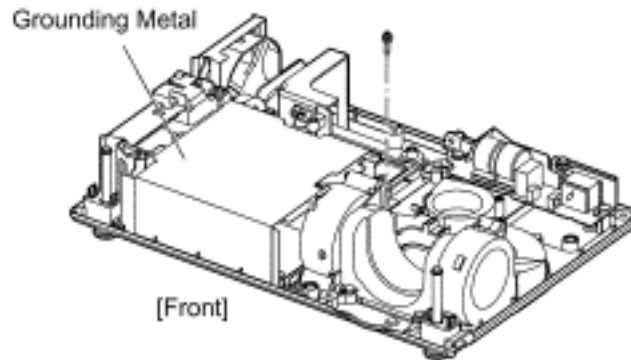


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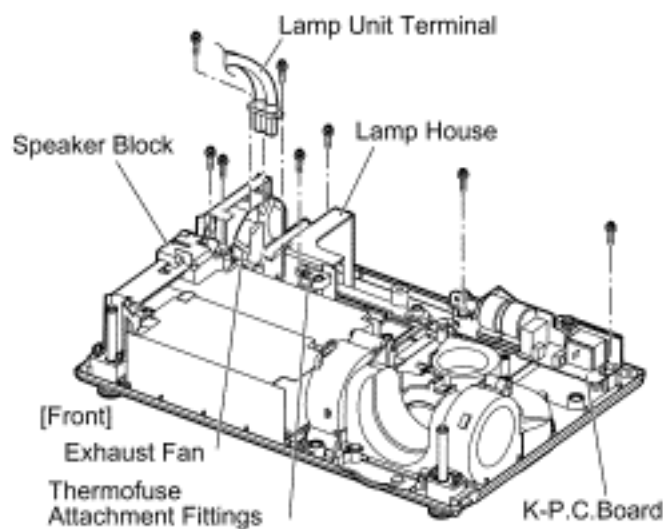
## 7.7 Removal of K-P.C.Board

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1. Remove the analysis block, LCD block and lens according to the steps 1 through 3 in the section 7.11. "Removal of Analysis Block and Lens".
2. Unscrew the screws (PT-LB10NTU/E: 1, Others: 3) and remove the grounding metal.



3. Unscrew the 2 screws and remove the lamp unit terminal.
4. Unscrew the 2 screws and remove the exhaust fan and speaker block.
5. Unscrew the 2 screws and remove the lamp house and thermofuse attachment fittings.
6. Unscrew the 2 screws and remove the K-P.C.Board.

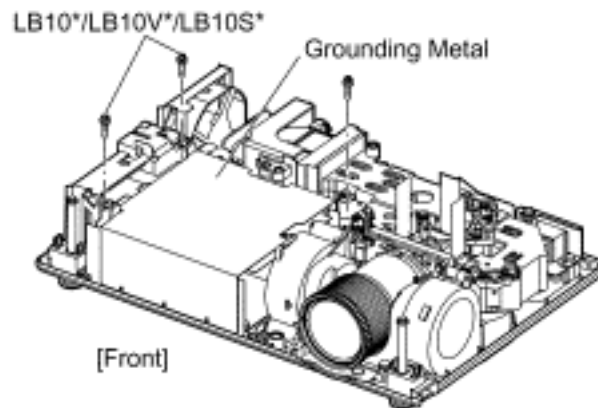


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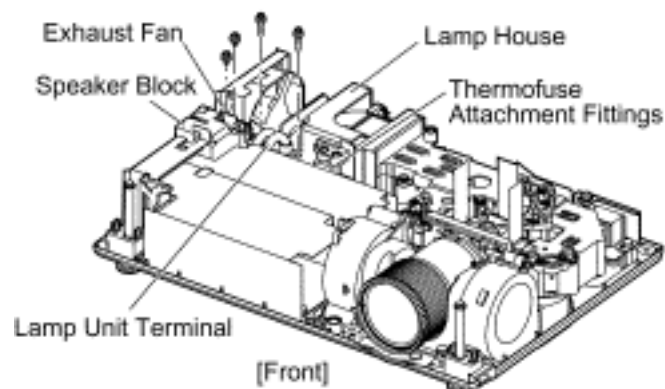
## 7.8 Removal of B/Q-Module

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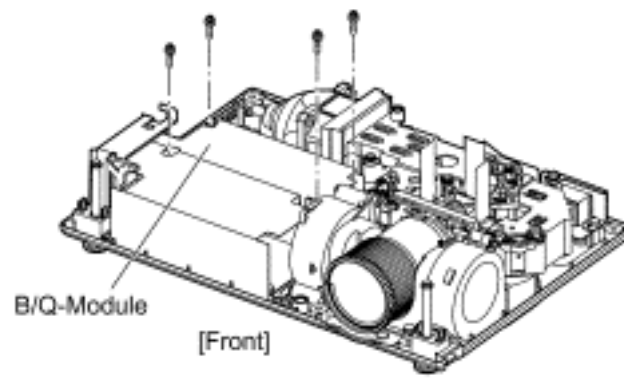
1. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
2. Unscrew the screws (PT-LB10NTU/E: 1, Others: 3) and remove the grounding metal.



3. Unscrew the 2 screws and remove the lamp unit terminal.
4. Unscrew the 3 screws and remove the lamp house and thermofuse attachment fittings.
5. Unscrew the 1 screws and remove the exhaust fan and speaker block.



6. Unscrew the 4 screws and remove the B/Q-Module.



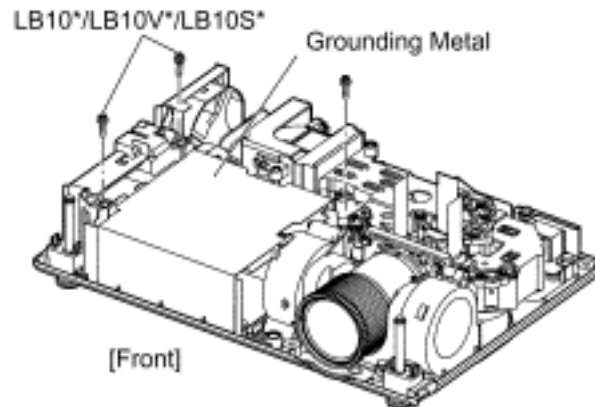
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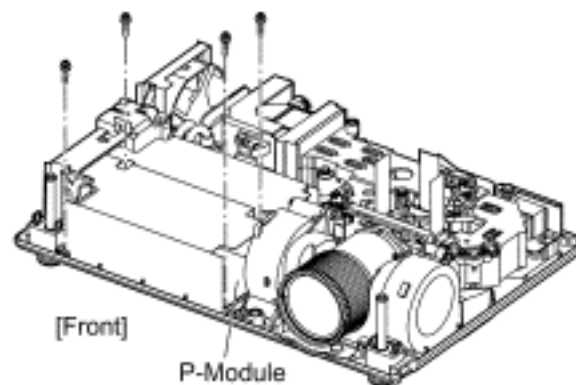
# 7.9 Removal of P-Module

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1. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
2. Unscrew the screws (PT-LB10NTU/E: 1, Others: 3) and remove the grounding metal.



3. Unscrew the 4 screws and remove the P-Module.

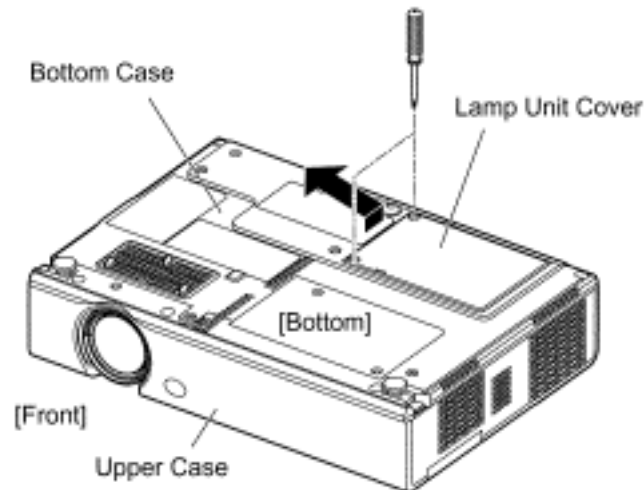


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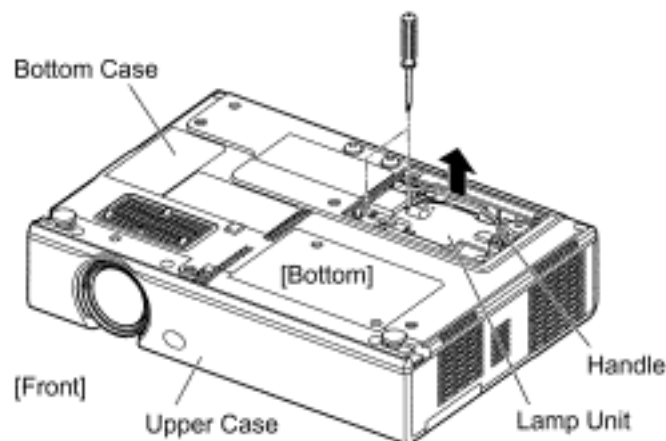
# 7.10 Removal of Lamp Unit

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1. Turn the projector upside down.
2. Loosen the 2 screws until they idle, remove the lamp unit cover.



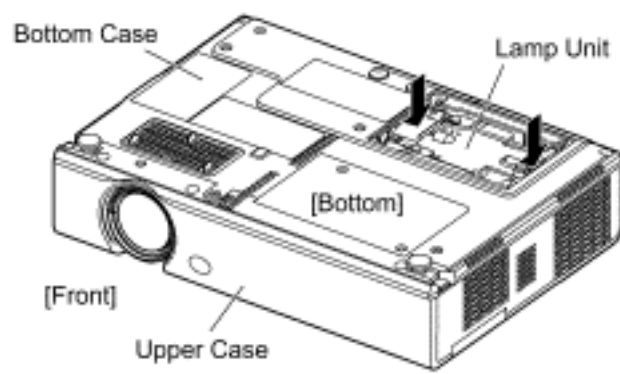
3. Loosen the 2 screws until they idle, remove the lamp unit with the handle.



## Note:

- When installing the lamp unit (or a new one) in the main unit, place it in a specified position and press the connector side and the opposite side of the lamp unit (arrow positions shown in the figure below), and confirm the lamp unit is inserted securely.

Then, tighten the 2 screws fixing the lamp unit, and attach the lamp unit cover.

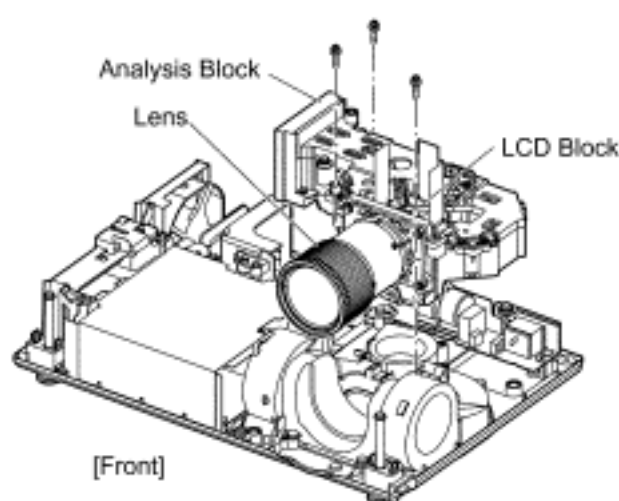


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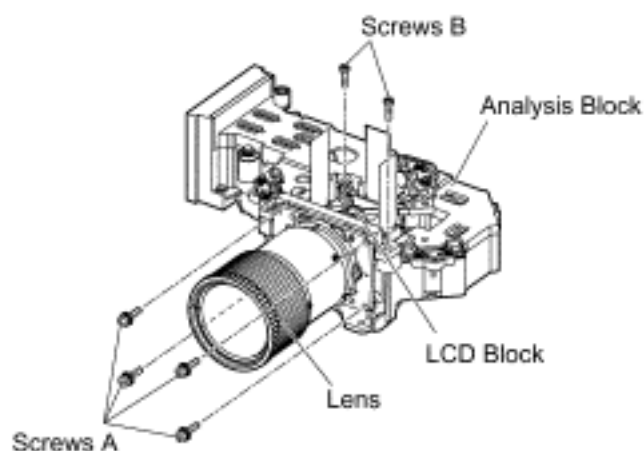
# 7.11 Removal of Analysis Block and Lens

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1. Remove the lamp unit according to the section 7.10. "Removal of Lamp Unit".
2. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
3. Unscrew the 3 screws and remove the analysis block, LCD block and lens.



4. Unscrew the 4 screws A and remove the lens.
5. Unscrew the 2 screws B and remove the LCD block (the analysis block remains).



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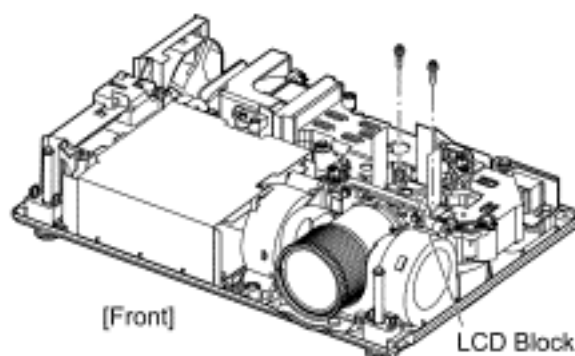
# 7.12 Removal of LCD Block

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1. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
2. Unscrew the 2 screws and remove the LCD block.

## Note:

- Be careful not to touch the surface of prism and LCD panel.



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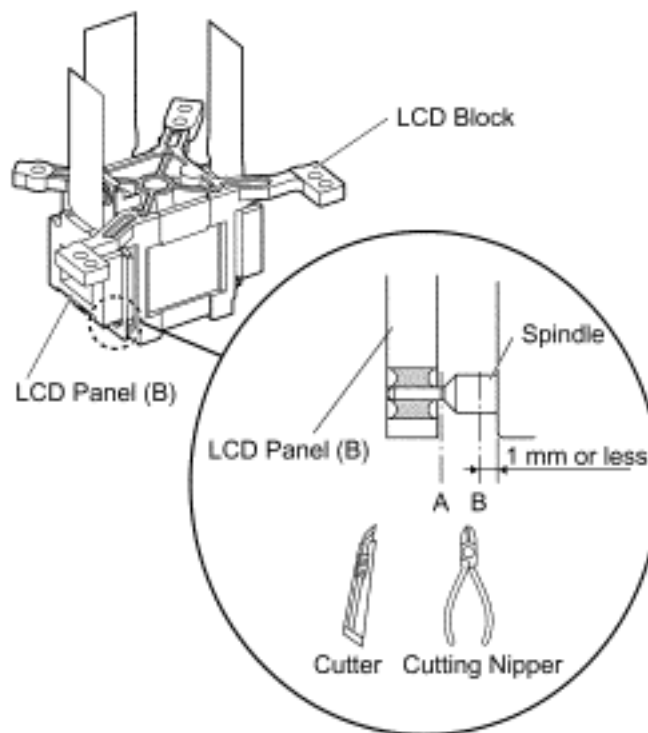
# 7.13 Replacement of LCD Panel

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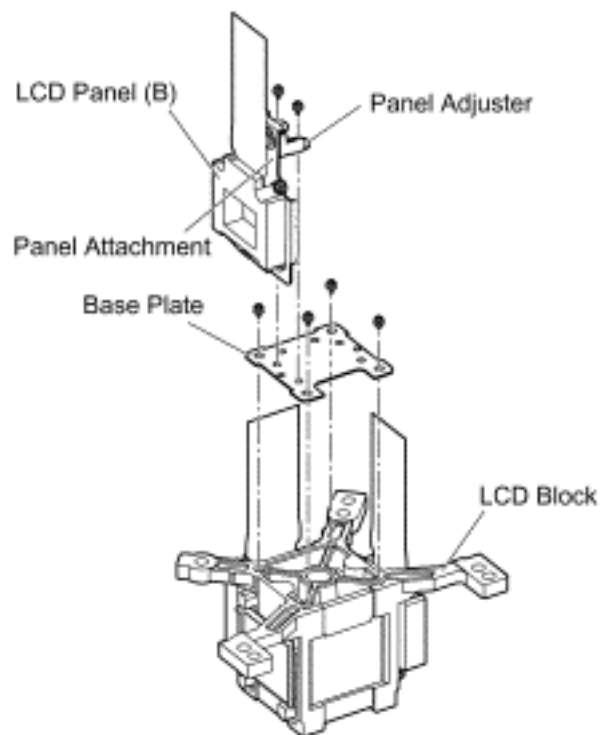
- The procedure is described as an example of LCD panel (B).
1. Remove the LCD block according to the section 7.12. "Removal of LCD Block".
  2. Cut the 4 LCD panel installation spindles at the position A and remove the LCD panel.
  3. Cut the 4 LCD panel installation spindles at the position B and remove them.

## Notes:

- Work carefully not to apply external force around the spindle part by using a cutter, cutting nipper or the like for cutting the spindle.
- Adjust the height after the spindle is cut to 1 mm or less.



4. Attach the base plate with 4 screws.
5. Tighten the 2 screws temporarily just until new LCD panel (with the panel attachment and panel adjuster) can be shifted by your fingers.

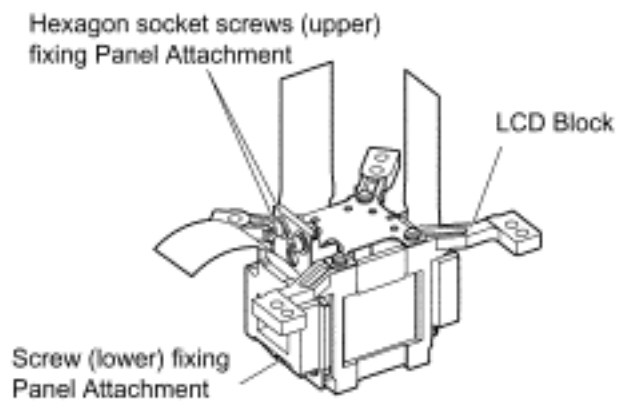


6. Reassemble the projector in the reverse order of disassembling, but leave the upper case and the screws fixing the A-P.C.Board block as they are removed.
7. Adjust the convergence according to the section 8.4. "Convergence Adjustment".
8. After the adjustment, while paying attention not to vary the adjusting result, tighten the 2 screws (upper) fixing the panel attachment temporarily with a hexagon head wrench.

**Notes:**

- Prepare a hexagon head wrench processed short.
- Service tool (Part No. TZSH070010), hexagon head wrench processed short, is available.

9. Remove the LCD block again.
10. Tighten the 3 screws fixing the panel attachment.



Note:

- For PT-LB10NTU/E, the screw (lower) fixing the panel attachment holds the installation of the LCD panel concurrently.

11. Reassemble the projector as it was.

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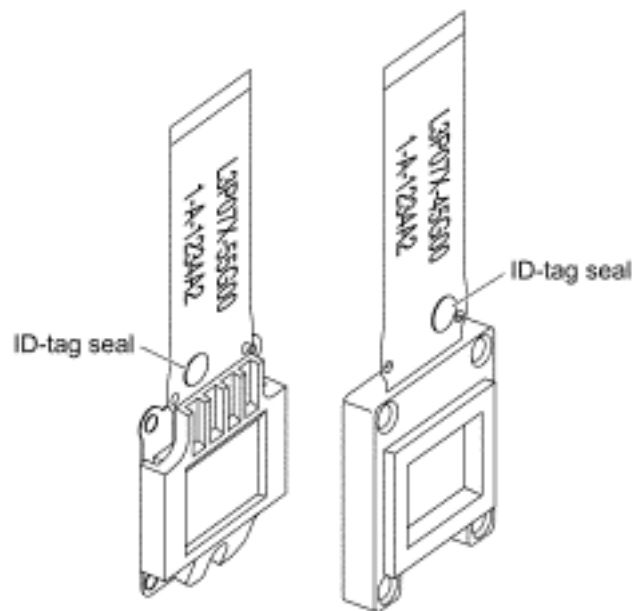


# 7.14 LCD Panel Discrimination

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ID-tag seal color	LCD panel
Red	LCD panel (R)
Blue	LCD panel (B)
(No seal)	LCD panel (G)

- Since the ID-tag seal is pasted to the FPC of LCD Panel, (R), (G) or (B) can be easily identified by the color of the seal.
- Finally, identify the panel color by the part number printed on the FPC.



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# 7.15 LCD Panel Combination

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- Part number is printed on the FPC of LCD Panel.
- When replacing LCD Panel, use a component which has the same part number as the original.

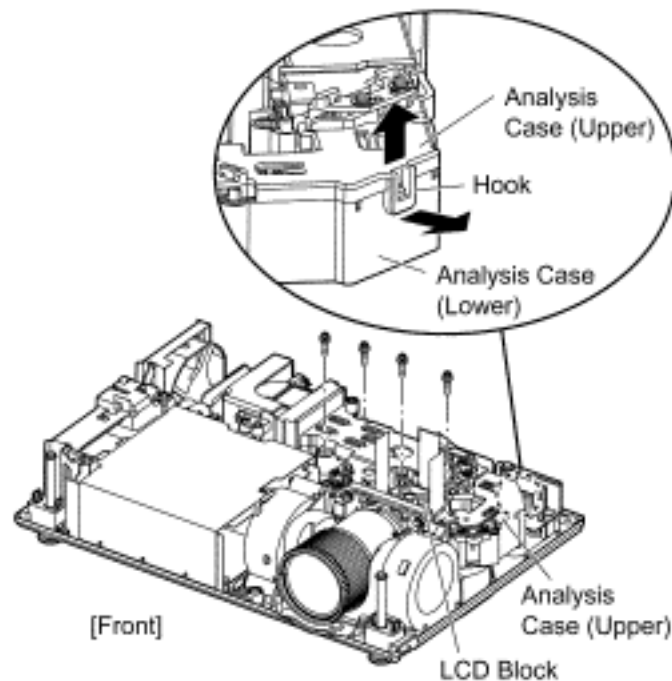
Model number	LCD panel	Part No.
	R	L5BDAXQ00143 (L3P07X-55G00)
PT-LB10NTU/E PT-LB10U/E	G	L5BDAXQ00144 (L3P07X-55G00)
	B	L5BDAXQ00145 (L3P07X-55G00)
	R	L5BDAXQ00131 (L3P07X-45G00)
PT-LB10VU/E	G	L5BDAXQ00132 (L3P07X-45G00)
	B	L5BDAXQ00133 (L3P07X-45G00)
	R	L5BDAXN00073 (L03P07S-46G00)
PT-LB10SU/E	G	L5BDAXN00074 (L03P07S-46G00)
	B	L5BDAXN00075 (L03P07S-46G00)

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# 7.16 Replacement of Incidence Polarizer

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1. Remove the LCD block according to the section 7.12. "Removal of LCD Block".
2. Unscrew the 2 screws.
3. Remove the analysis case (upper) while expanding the hook of it outside.



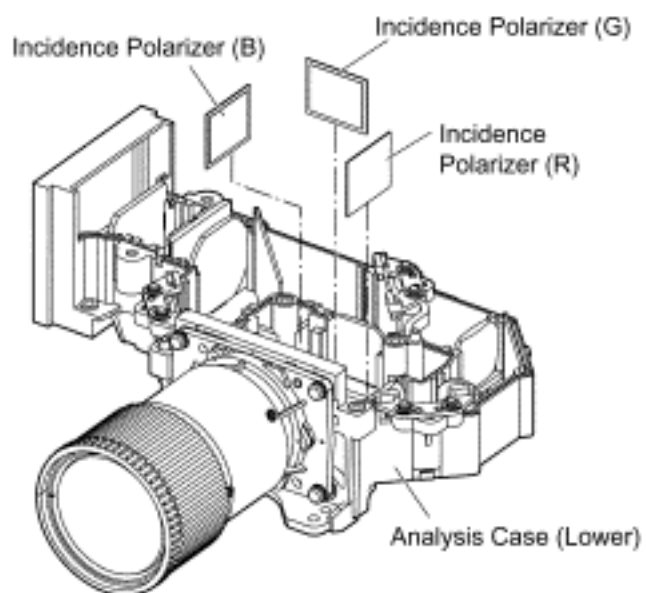
Note:

- Because the hook is damaged easily, be careful not to expand it excessively.

4. Replace the incidence polarizer.

Note:

- Be careful not to touch the surface of incidence polarizer.



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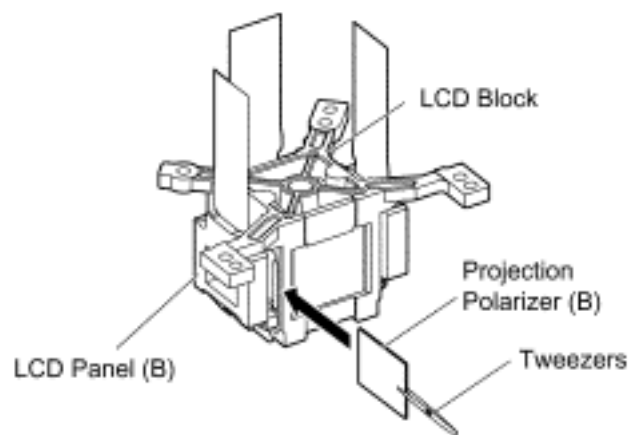
# 7.17 Replacement of Projection Polarizer

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- The procedure is described as an example of projection polarizer (B).
1. Remove the LCD block according to the section 7.12. "Removal of LCD Block".
  2. Remove the projection polarizer which requires replacing. (The projection polarizer is secured with adhesive tape.)

## Notes:

- Be careful not to damage peripheral components (prism, LCD panel, etc.).
- Use tweezers.

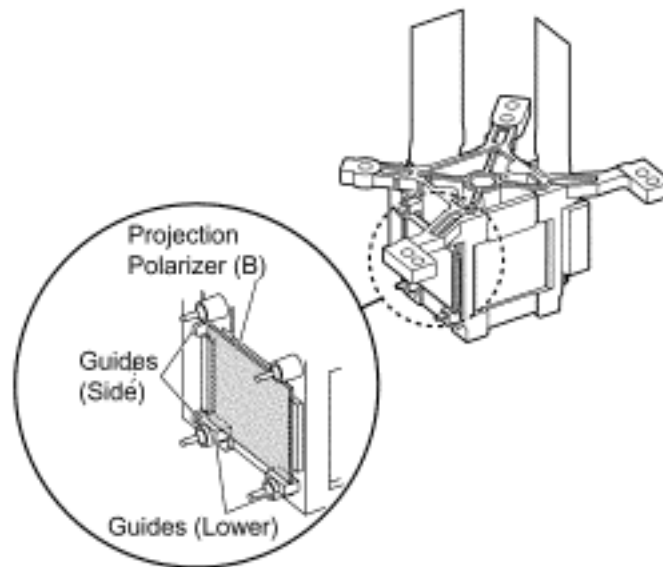


3. Install new projection polarizer.
  - A. Put adhesive tape on the projection polarizer.
  - B. Stick the projection polarizer on the specified position.

## Notes:

- Align the projection polarizer with the guides (lower, side) of LCD block.
- Be careful not to touch the surface of projection polarizer.
- Use tweezers.

C. Press the adhesive part and secure the projection polarizer.



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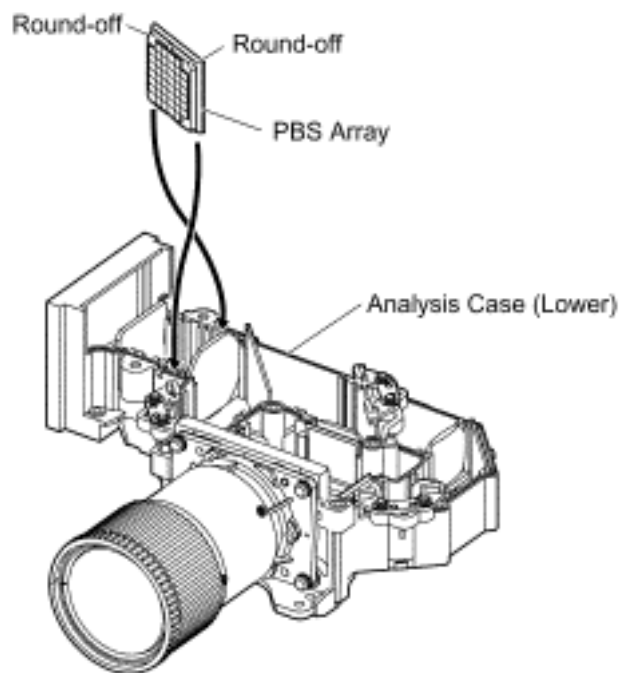
# 7.18 Replacement of PBS Array (Analysis Block)

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1. Remove the analysis case (upper) according to the steps 1 through 3 in the section 7.16. "Removal of Incidence Polarizer".
2. Remove the PBS array.
3. Install new PBS array.

## Note:

- Be careful not to mistake the direction (inside and outside, upper and lower).
- Be careful not to touch the surface of PBS array.



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# 8 Measurement and Adjustments

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[8.1 Adjustment Procedure Flowchart](#)

[8.2 Cautions for Adjustment](#)

[8.3 Setting Before Adjustment](#)

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[8.6 Software for Adjustment](#)

[8.6.1 Outline](#)

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[8.6.3 Port Selection Menu](#)

[8.6.4 Data Transmission / Reception Menu](#)

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[8.7 Flicker Adjustment](#)



## [8.8 Input Level Adjustment](#)

### [8.8.1 Adjustment Menu](#)

### [8.8.2 Explanation of Buttons](#)

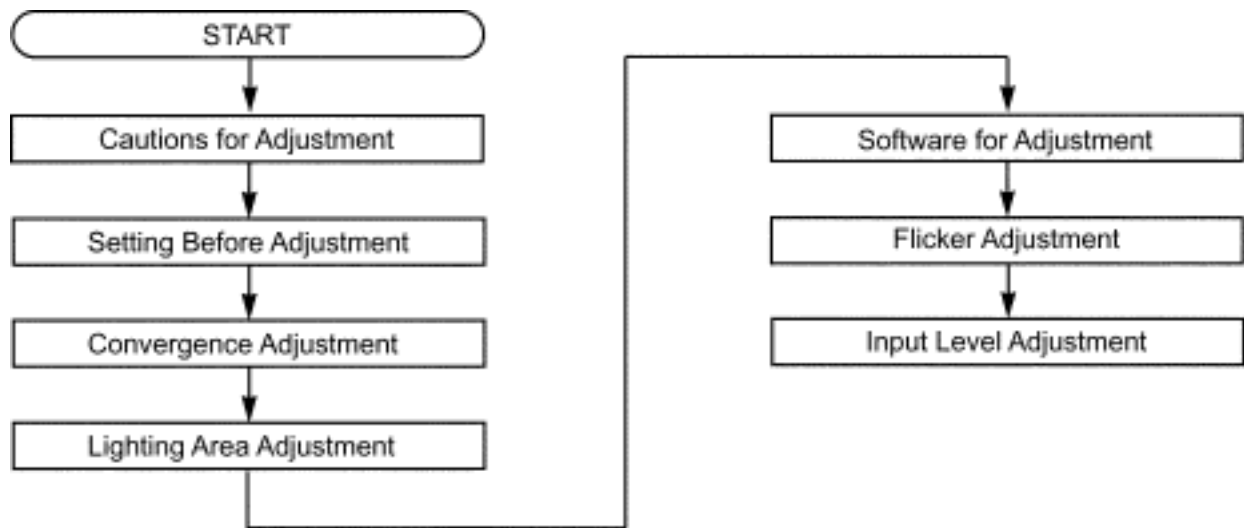
### [8.8.3 Equipment to be used](#)

### [8.8.4 Adjustment Procedure](#)

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# 8.1 Adjustment Procedure Flowchart

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## 8.2 Cautions for Adjustment

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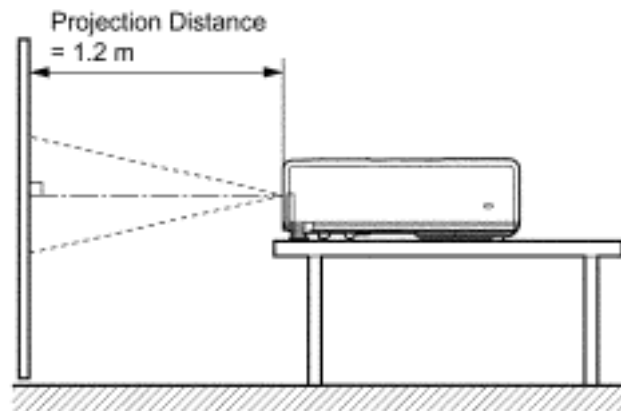
- Never unplug the power cord until the power indicator on the projector illuminates red.
- To maintain and ensure safety, always use the designated components for replacement parts.
- If removing any clamps, lead wires or connectors, always place them back in their proper locations.
- Be careful not to damage the lead wires or components when using a soldering iron or similar tool.

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## 8.3 Setting Before Adjustment

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- Set up the projector to obtain the projection distance below.
- Turn the zoom ring of the projector to obtain the largest size of the picture.



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# 8.4 Convergence Adjustment

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Execute this adjustment when replacing the LCD panel .

[8.4.1 Tools to be used](#)

[8.4.2 Preparation](#)

[8.4.3 Adjustment Procedure](#)

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## 8.4.1 Tools to be used

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Service Kit (Part No. TZSH07015): This kit is composed of 3 extension flexible cables and 3 connector extension cables.

Note:

- Consult your dealer or Authorized Service Center for the service kit.

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## 8.4.2 Preparation

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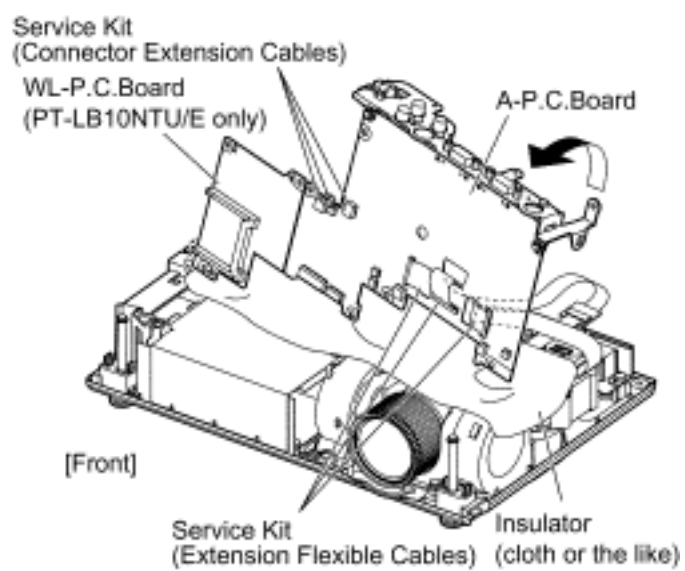
1. Loosen 2 screws fixing the panel adjuster and 3 screws fixing the panel attachment, then tighten the 5 screws temporarily just until the LCD panel can be shifted by your fingers.

**Note:**

- See figures in the section 7.13. "Replacement of LCD Panel" for 2 screws fixing the panel adjuster and 3 screws fixing the panel attachment.
2. Reassemble the projector in the reverse order of disassembling, but leave the upper case and the screws fixing the A-P.C.Board block as they are removed.
  3. Connect the service kit (extension cables).
    - Each flexible cable of LCD Panels (R/G/B) - Connectors (A1/A2/A3) on A-P.C.Board
    - Power fan connector - Connector (A16) on A-P.C.Board
    - Exhaust fan connector - Connector (A17) on A-P.C.Board
    - PBS fan connector - Connector (A19) on A-P.C.Board
  4. Covering with an insulator (cloth or the like) to prevent a short circuit, set the A-P.C.Board block on the main unit.

**Note:**

- Handle with care not to apply external force to connecting parts which connect the main unit and A-P.C.Board.



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## 8.4.3 Adjustment Procedure

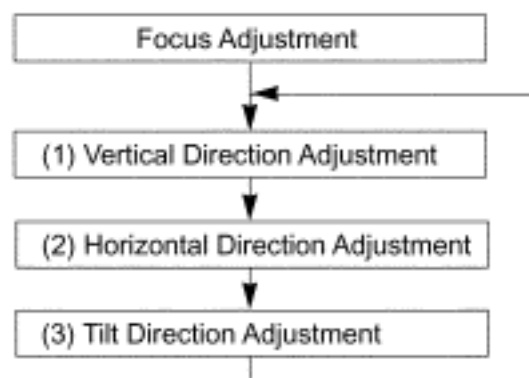
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Prepare 2 pieces of thick black paper (23 mm × 100 mm) that can be shaded.

- Cover and shade LCD panels with the paper except the panel for adjustment.

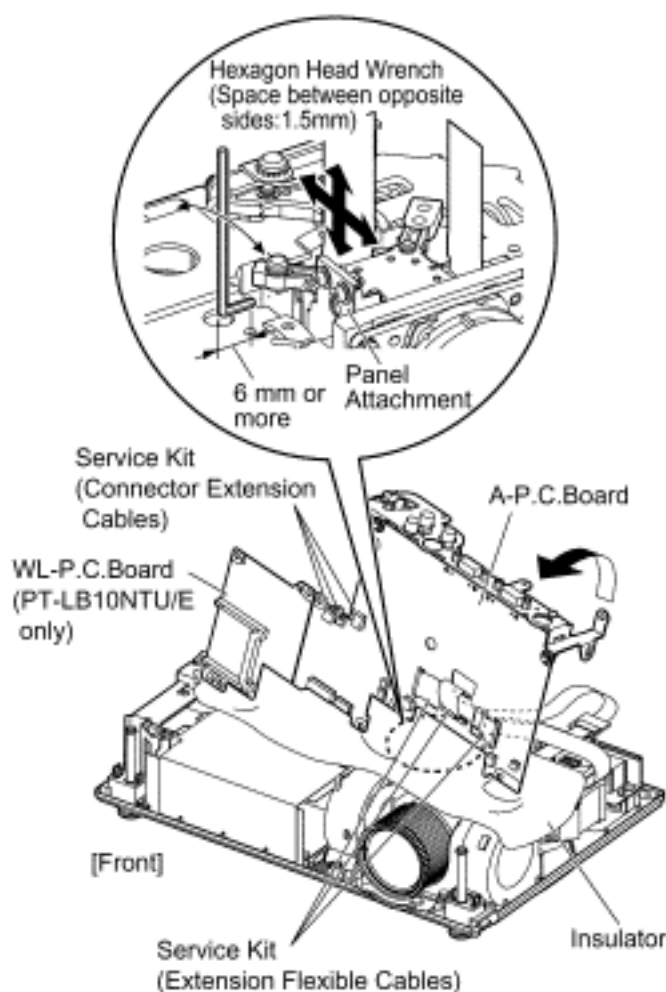
### 8.4.3.1 When replacing every LCD panel or LCD block

1. Display the green crosshatch pattern and adjust the lens focus.
2. Adjust focus by shifting the panel adjuster for LCD panel (G) back and forth, then tighten the 2 screws.
3. Display green and blue crosshatch patterns.
4. Adjust the LCD panel (B) position so that the vertical center of blue crosshatch pattern is overlapped with the vertical center of green crosshatch pattern.
5. Adjust the LCD panel (B) position so that the horizontal center of blue crosshatch pattern is overlapped with the horizontal center of green crosshatch pattern.
6. Correct the tilt of the blue crosshatch pattern by adjusting the LCD panel (B) position.
7. Adjust the LCD panel (R) position similarly.
8. Display green, red and blue crosshatch patterns and confirm the convergence. If it is necessary, fine adjust the convergence so that the red and/or blue crosshatch pattern is overlapped with green one.



Repeat steps (1) to (3) until the green and blue crosshatch patterns merge into a cyan pattern.

9. After the adjustment, reassemble the projector according to the steps 8 through 11 in the section 7.13. "Replacement of LCD Panel".



## 8.4.3.2 When replacing single LCD panel (R, G or B)

- The procedure is described as an example when LCD panel (B) is replaced.

1. Display the green crosshatch pattern and adjust the lens focus.
2. Display green and blue crosshatch patterns.
3. Adjust focus by shifting the panel adjuster for LCD panel (B) back and forth, then tighten the 2 screws.
4. Adjust the LCD panel (B) position so that the vertical center of blue crosshatch pattern is overlapped with the vertical center of green crosshatch pattern.

5. Adjust the LCD panel (B) position so that the horizontal center of blue crosshatch pattern is overlapped with the horizontal center of green crosshatch pattern.
6. Correct the tilt of the blue crosshatch pattern by adjusting the LCD panel (B) position.
7. Display green, red and blue crosshatch patterns and confirm the convergence. If it is necessary, fine adjust the convergence so that the red and/or blue crosshatch pattern is overlapped with green one.

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# 8.5 Lighting Area Adjustment

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[8.5.1 Tools to be used](#)

[8.5.2 Preparation](#)

[8.5.3 Adjustment Procedure](#)

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## 8.5.1 Tools to be used

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Service Kit (Part No. TZSH07015): This kit is composed of 3 extension flexible cables and 3 connector extension cables.

Note:

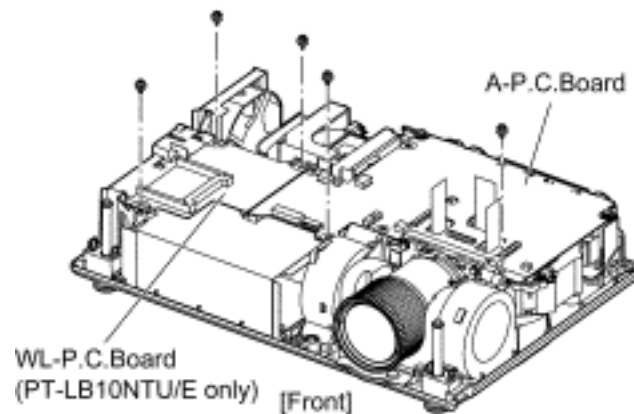
- Consult your dealer or Authorized Service Center for the service kit.

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## 8.5.2 Preparation

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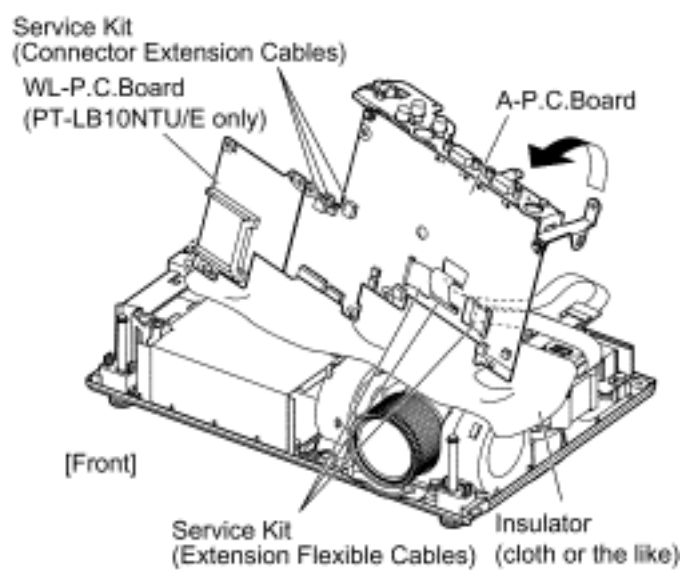
1. Remove the connector panel and grounding metal (2) according to the steps 1 through 4 in the section 7.3. "Removal of A-P.C.Board".
2. Unscrew the screws (PT-LB10NTU/E: 5, Others: 2).



3. Connect the service kit (extension cables).
  - Each flexible cable of LCD Panels (R/G/B) - Connectors (A1/A2/A3) on A-P.C.Board
  - Power fan connector - Connector (A16) on A-P.C.Board
  - Exhaust fan connector - Connector (A17) on A-P.C.Board
  - PBS fan connector - Connector (A19) on A-P.C.Board
4. Covering with an insulator (cloth or the like) to prevent a short circuit, set the A-P.C.Board block on the main unit.

### Note:

- Handle with care not to apply external force to connecting parts which connect the main unit and A-P.C.Board.



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## 8.5.3 Adjustment Procedure

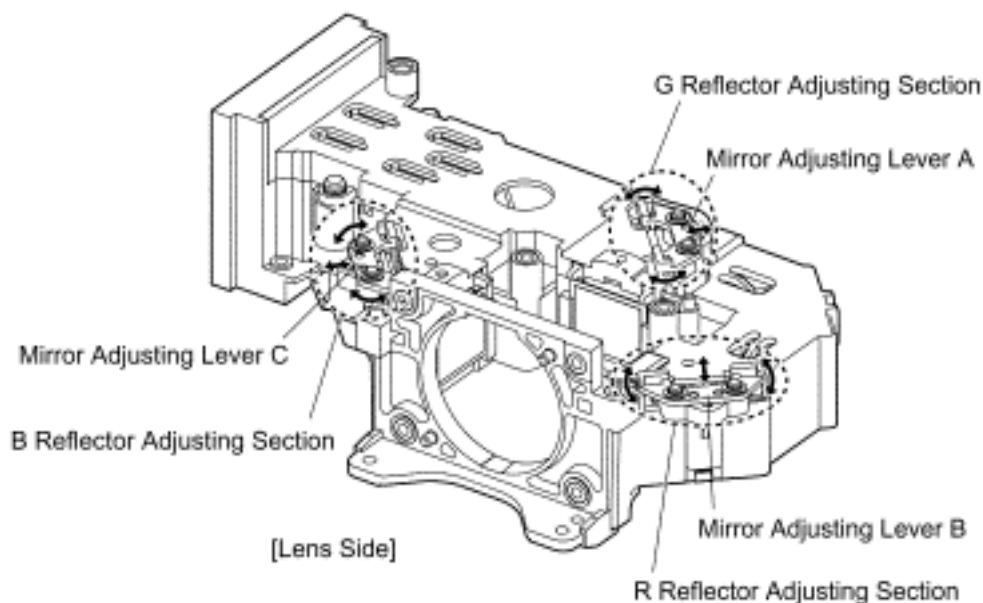
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### 8.5.3.1 Outline

When the lighting area is off from the adjustment and color unevenness appears, adjust the lighting area into correct position.

Symptom	Measure
Magenta unevenness	G Reflector Adjustment
Cyan unevenness	R Reflector Adjustment
Yellow unevenness	B Reflector Adjustment

- Shifting the mirror adjusting lever horizontally, adjust color unevenness on the screen upper/lower sides.
- Twisting the mirror adjusting lever, adjust color unevenness on the screen right/left sides.



[Above figure is shown only the analysis block for explanation.]

### 8.5.3.2 G Reflector Adjustment

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 2 screws fixing the mirror adjusting lever A just until the lever can be shifted.



3. Adjust the mirror adjusting lever A position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 2 screws.

### **8.5.3.3 R Reflector Adjustment**

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 2 screws fixing the mirror adjusting lever B just until the lever can be shifted.
3. Adjust the mirror adjusting lever B position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 2 screws.

### **8.5.3.4 B Reflector Adjustment**

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 2 screws fixing the mirror adjusting lever C just until the lever can be shifted.
3. Adjust the mirror adjusting lever C position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 2 screws.

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# 8.6 Software for Adjustment

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[8.6.1 Outline](#)

[8.6.2 Operating Procedure](#)

[8.6.3 Port Selection Menu](#)

[8.6.4 Data Transmission / Reception Menu](#)

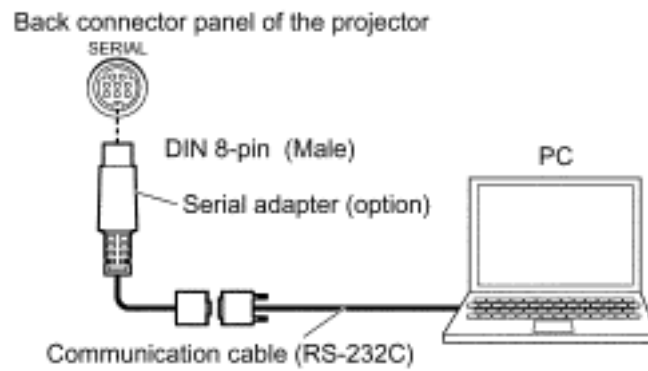
[8.6.5 Adjustment Menu](#)

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## 8.6.1 Outline

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- This projector needs computer-aided adjustments.
- After the software adjustments, this projector must be turned off and on again to memorize the settings.
- Connect the cable between the projector and a PC as shown below.
- Updating the software will change the version number.



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## 8.6.2 Operating Procedure

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1. Run software program by the keyboard entry.

Note:

- Use the software program as below.

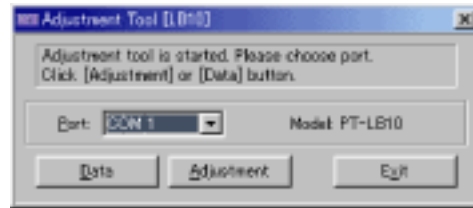
Adjustment Tool [LB10]

2. The first menu is Port selection menu.
3. Adjust the projector by selecting the necessary item from the menu in each stage.

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## 8.6.3 Port Selection Menu

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Select the applying item with the list box and click "Data" or "Adjustment".

### 8.6.3.1 Explanation of Buttons

**Port:**

Port name of PC which connects with the projector

**Data:**

Displays the data transmission/reception menu.

**Adjustment:**

Displays the adjustment menu.

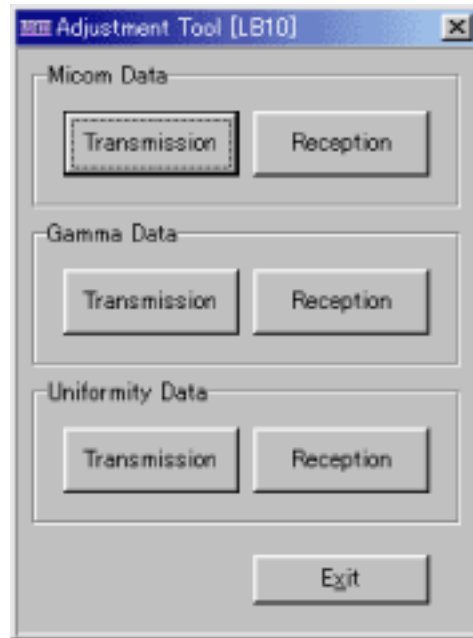
**Exit:**

Exits this application.

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## 8.6.4 Data Transmission/Reception Menu

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### 8.6.4.1 Explanation of Buttons

#### Micom Data Transmission:

Reads the microcomputer data from the file and transmits it to the projector.

#### Micom Data Reception:

Receives the microcomputer data from the projector and writes it in the file.

#### Gamma Data Transmission:

Reads the gamma data from the file and transmits it to the projector.

#### Gamma Data Reception:

Receives the gamma data from the projector and writes it in the file.

#### Uniformity Data Transmission:

Reads the color unevenness correction data from the file and transmits it to the projector.

### Uniformity Data Reception:

Receives the color unevenness correction data from the projector and writes it in the file.

### Exit:

Exits this application.

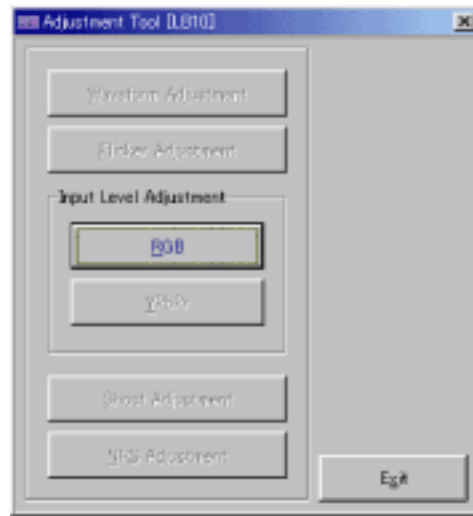
## 8.6.4.2 Receiving and transmitting of the data

Click a target button and specify a file name.

[TOP](#) [PREVIOUS](#) [NEXT](#)

## 8.6.5 Adjustment Menu

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### 8.6.5.1 Explanation of Buttons

**Input Level Adjustment RGB:**

Displays the RGB input level adjustment menu.

**Exit:**

Exits this application.

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## 8.7 Flicker Adjustment

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According to the procedure of chapter 5 "Flicker Adjustment Mode", minimize the flicker.

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# 8.8 Input Level Adjustment

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[8.8.1 Adjustment Menu](#)

[8.8.2 Explanation of Buttons](#)

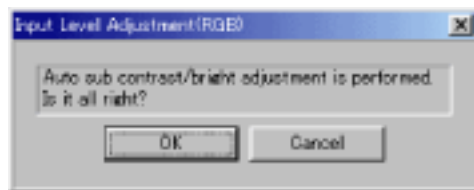
[8.8.3 Equipment to be used](#)

[8.8.4 Adjustment Procedure](#)

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# 8.8.1 Adjustment Menu

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## 8.8.2 Explanation of Buttons

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OK:

Executes automatic sub contrast and sub brightness adjustments, then closes this dialog.

Cancel:

Cancels this menu.

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## 8.8.3 Equipment to be used

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PC, RGB Signal Generator, Software for Adjustment

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## 8.8.4 Adjustment Procedure

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1. Display the input level adjustment [RGB] menu.
2. Input a window pattern signal to RGB IN connector.

**Note:**

- Use approx. 15 % window pattern as follows.

Black background (screen width) : White window width = 2 : 1

Black background (screen height) : White window height = 3 : 1

- PT-LB10NTU/E, LB10U/E, LB10VU/E must use the window pattern of XGA (1 024 × 768).
- PT-LB10SU/E must use the window pattern of S-VGA (800 × 600).

3. Click the OK button.

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# 9 Troubleshooting

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The letters in the left of the inspection items indicate the P.C.Boards or Modules related to their respective descriptions.

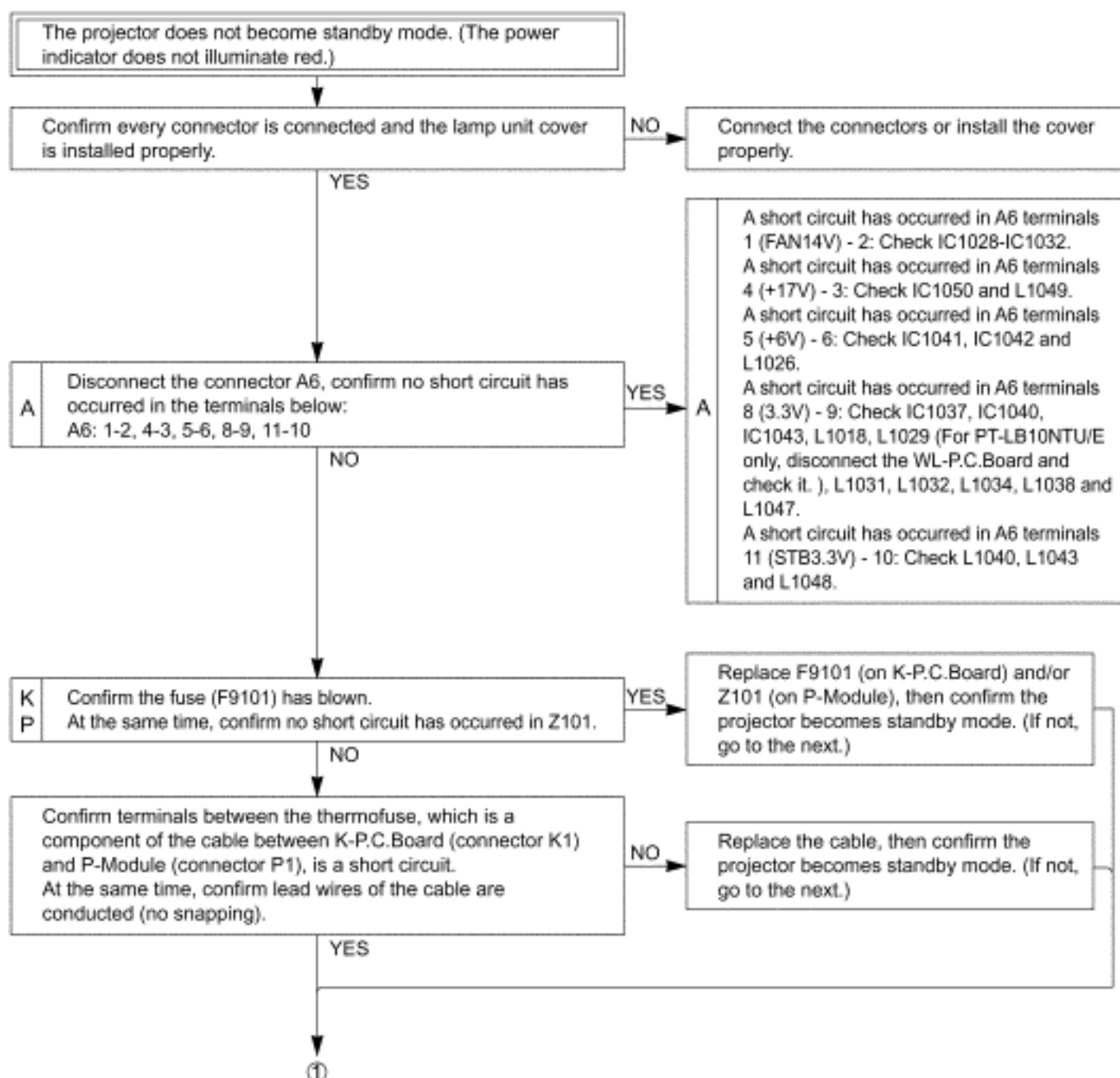
Note: A

The letter of the alphabet indicates the P.C.Board or Module name.

(Example) A: A-P.C.Board, B: B-Module

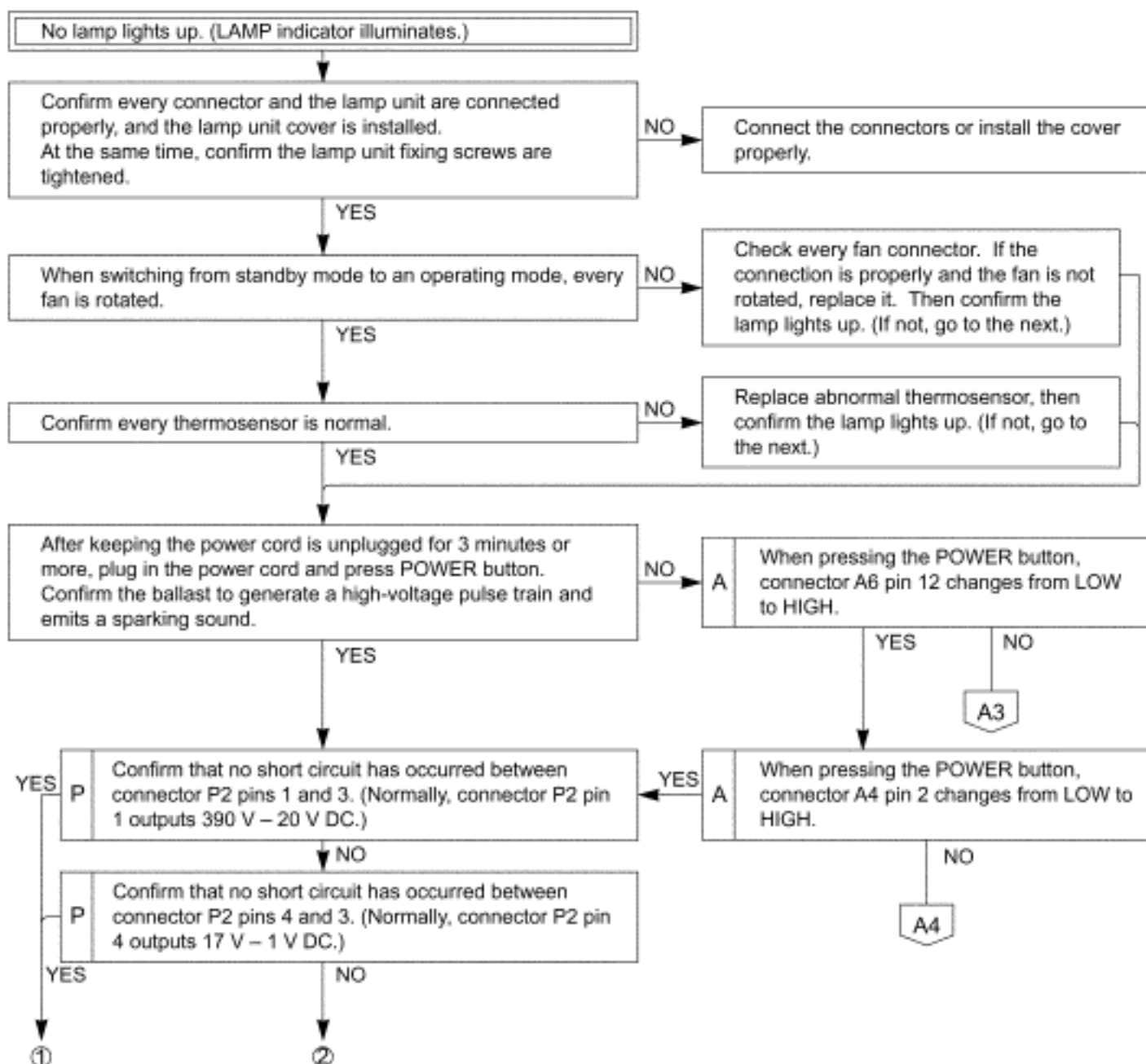
If replacing A-P.C.Board (assembly), read the ROM data from the old P.C.Board and write it in the new one according to the section 8.6. "Software for Adjustment". At this time, if the readout from the old P.C.Board does not succeed, remove IC1011 and IC1017 from the old P.C.Board and install them on the new one.

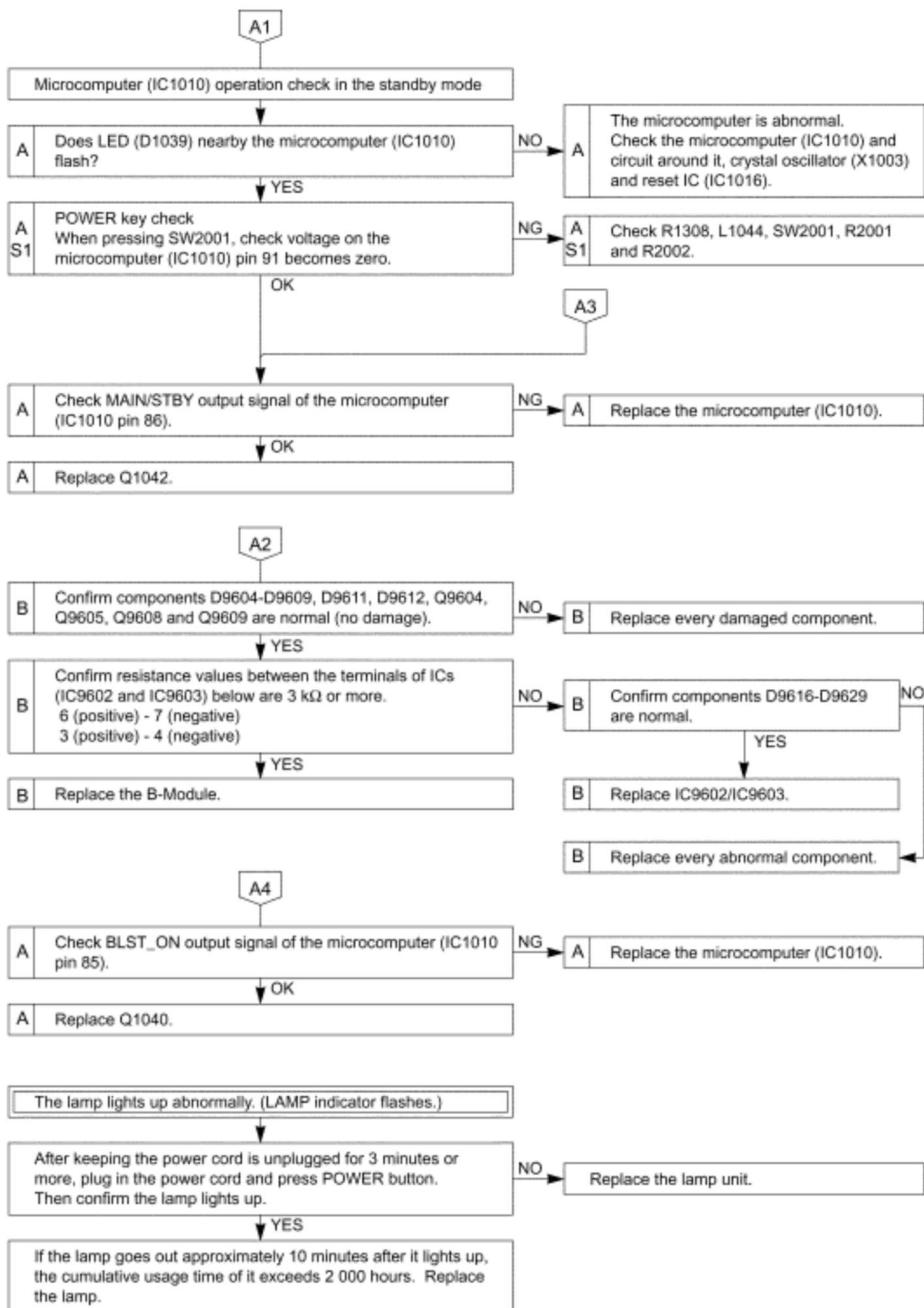
If replacing A-P.C.Board (assembly), adjust the RGB Input Level according to the chapter 8.8. "Input Level Adjustment".

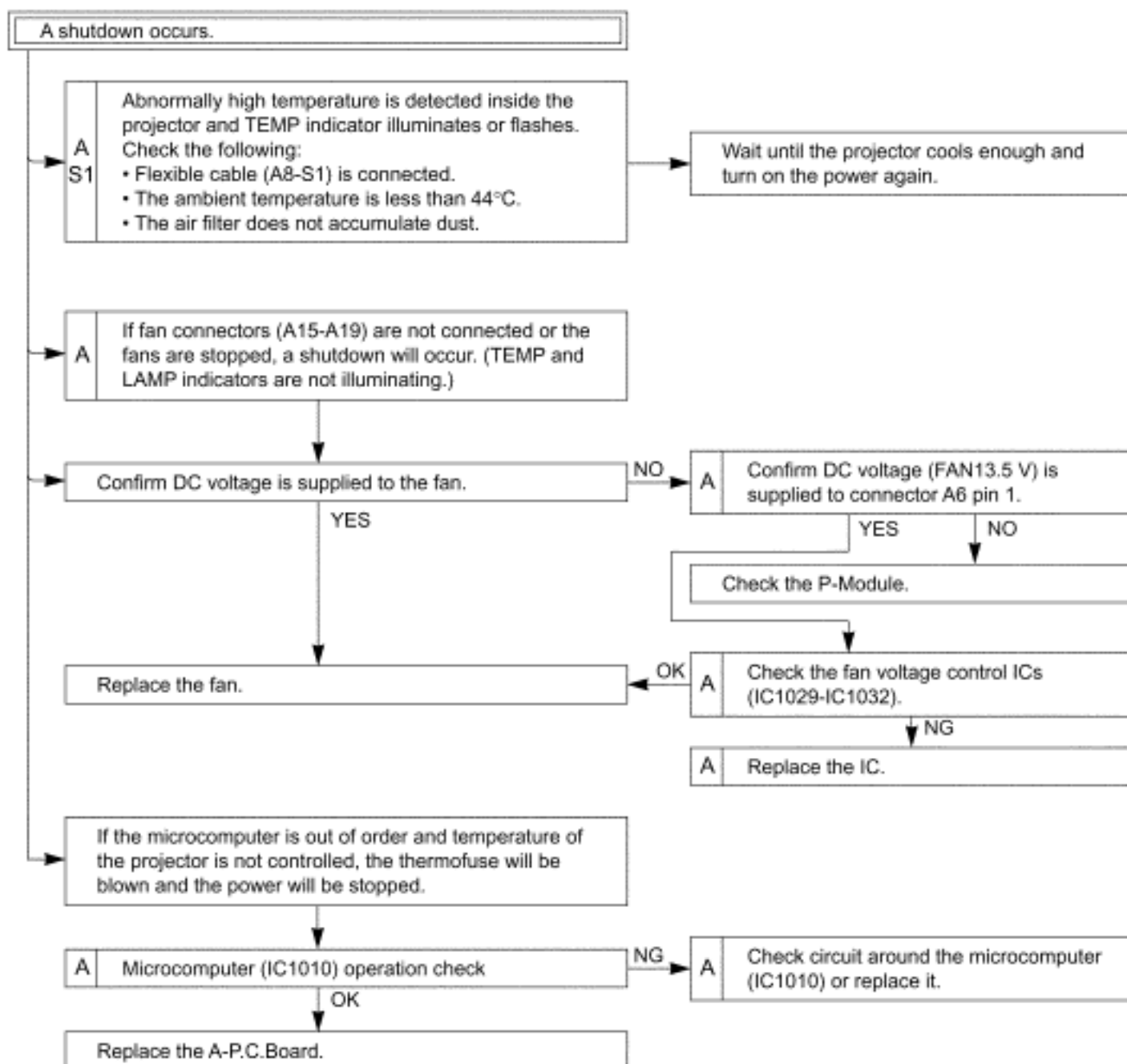


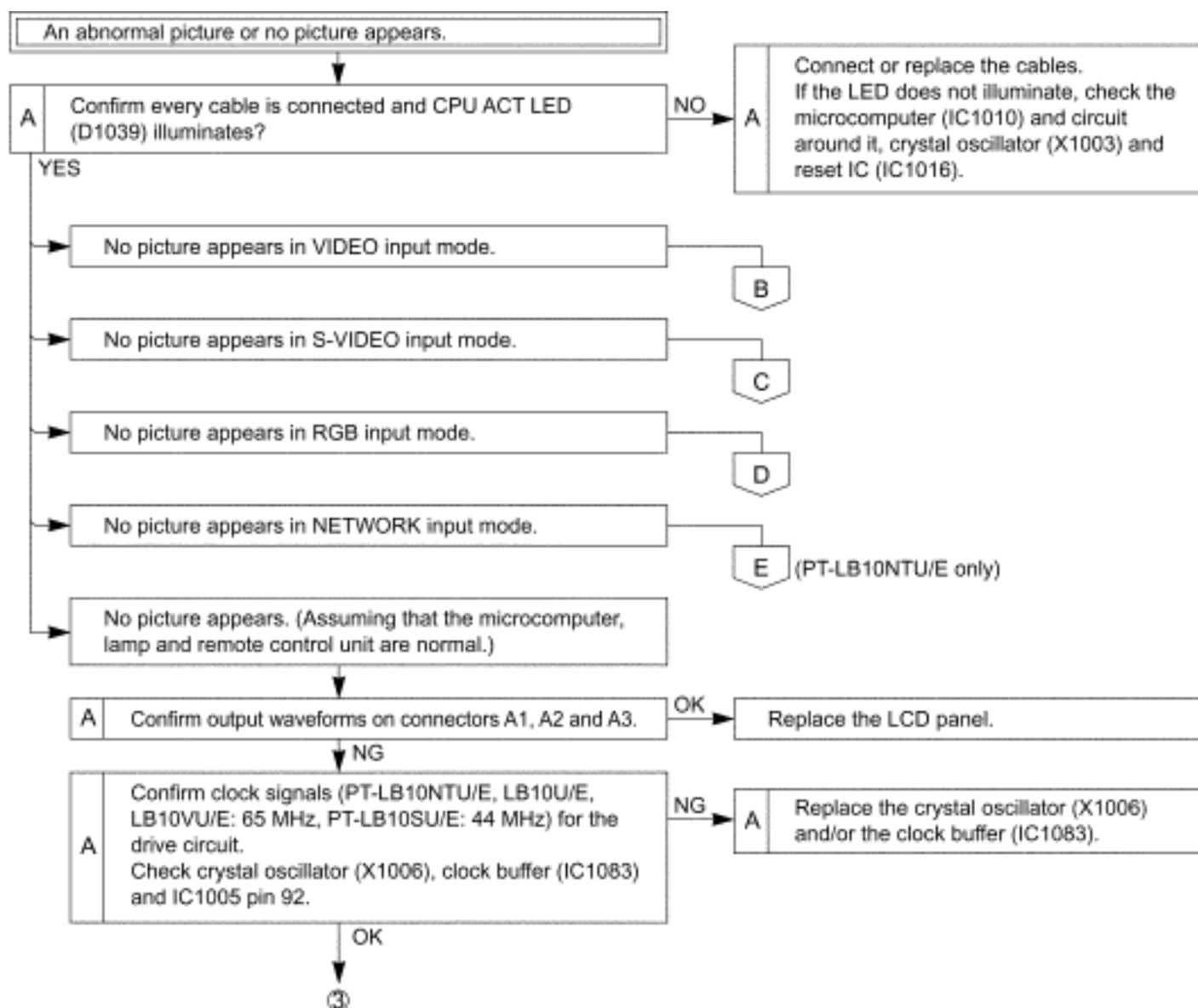


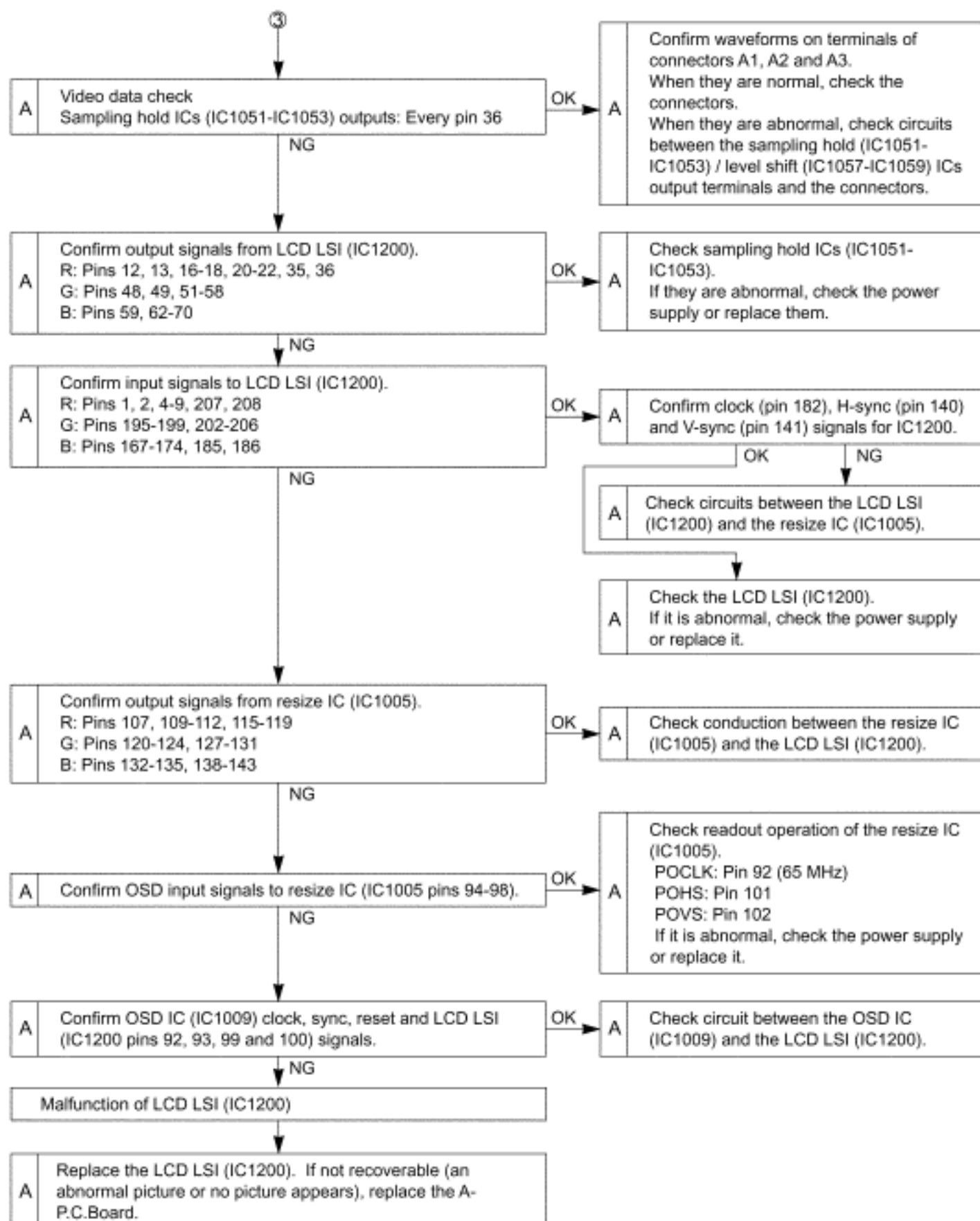


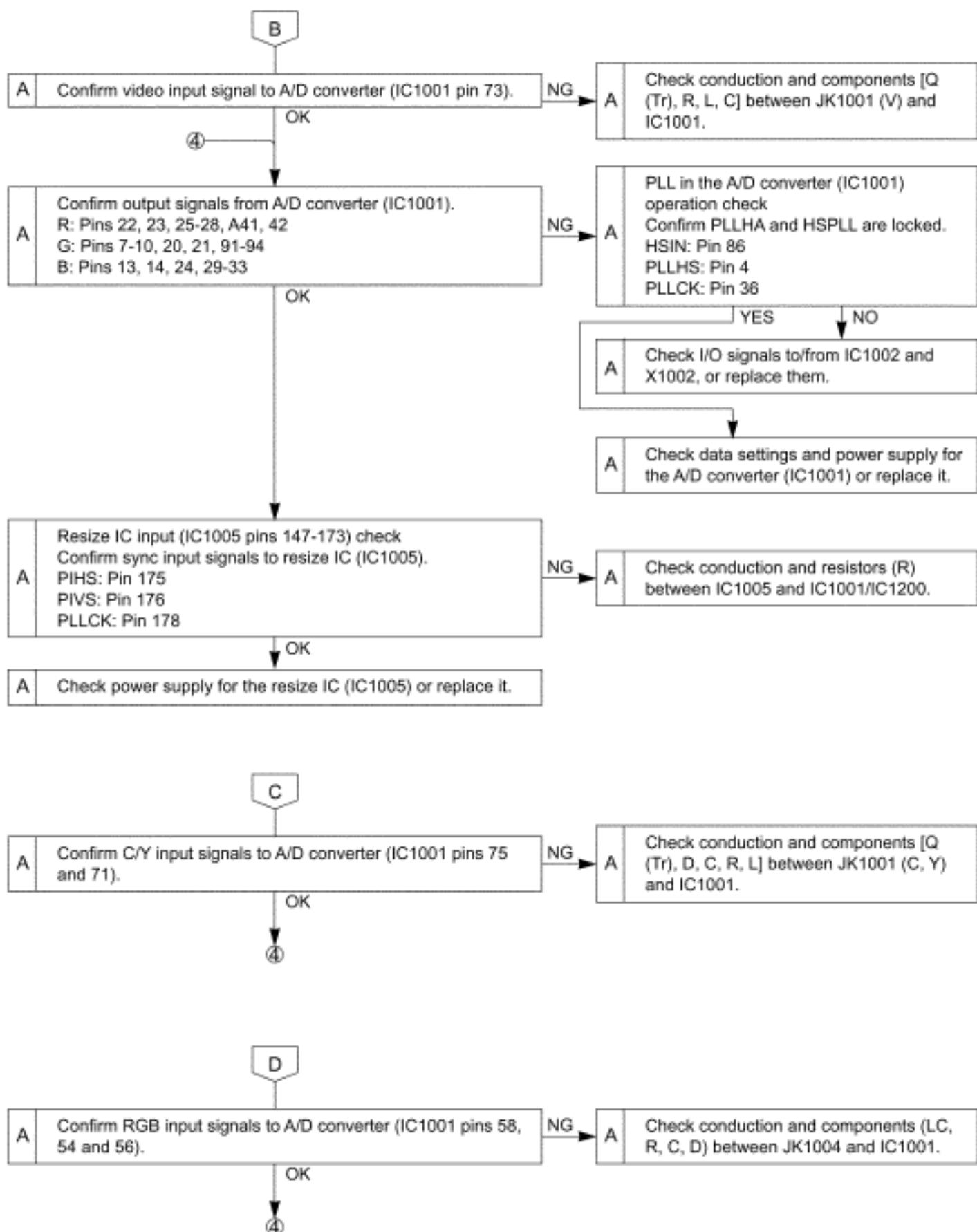


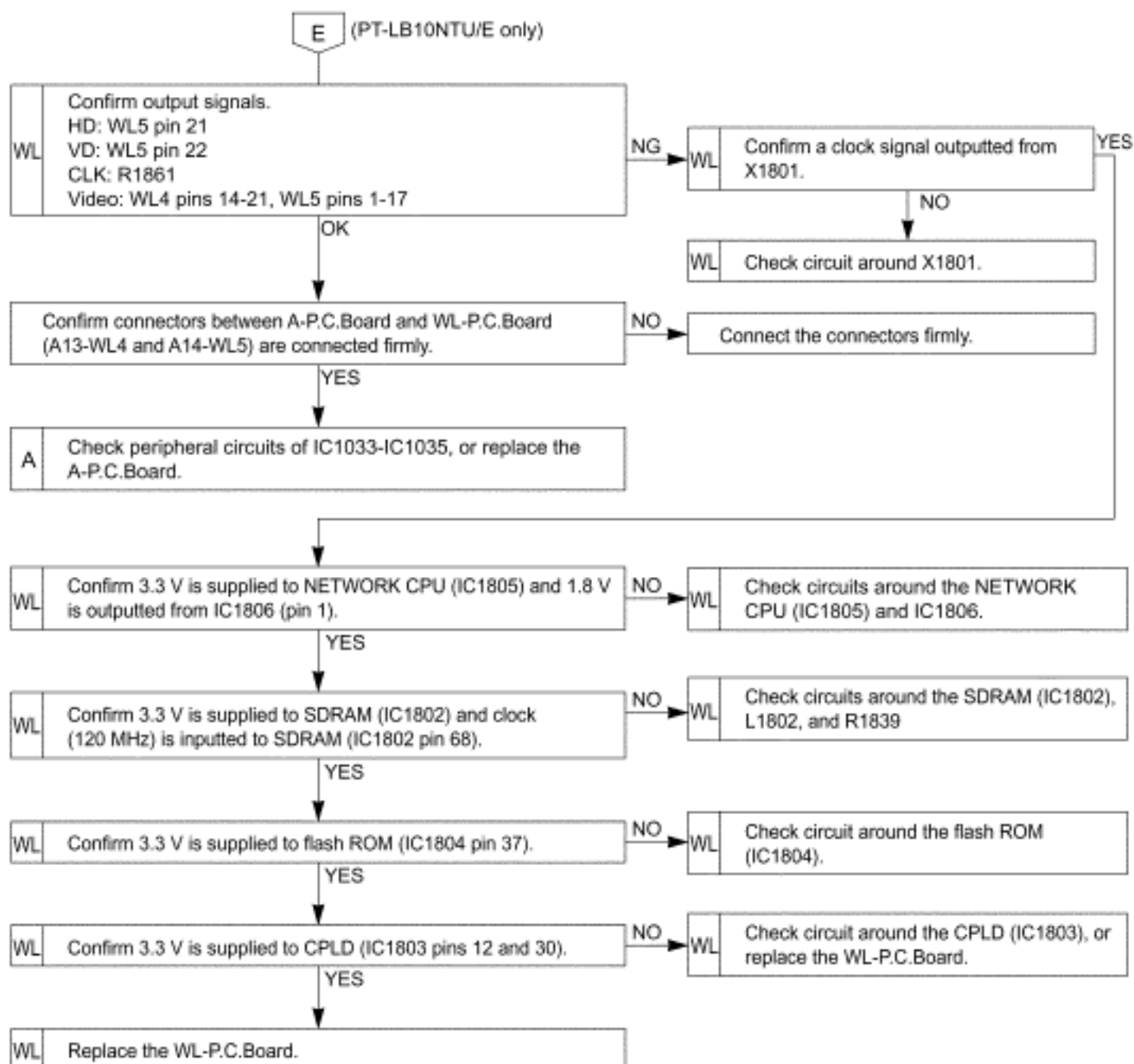


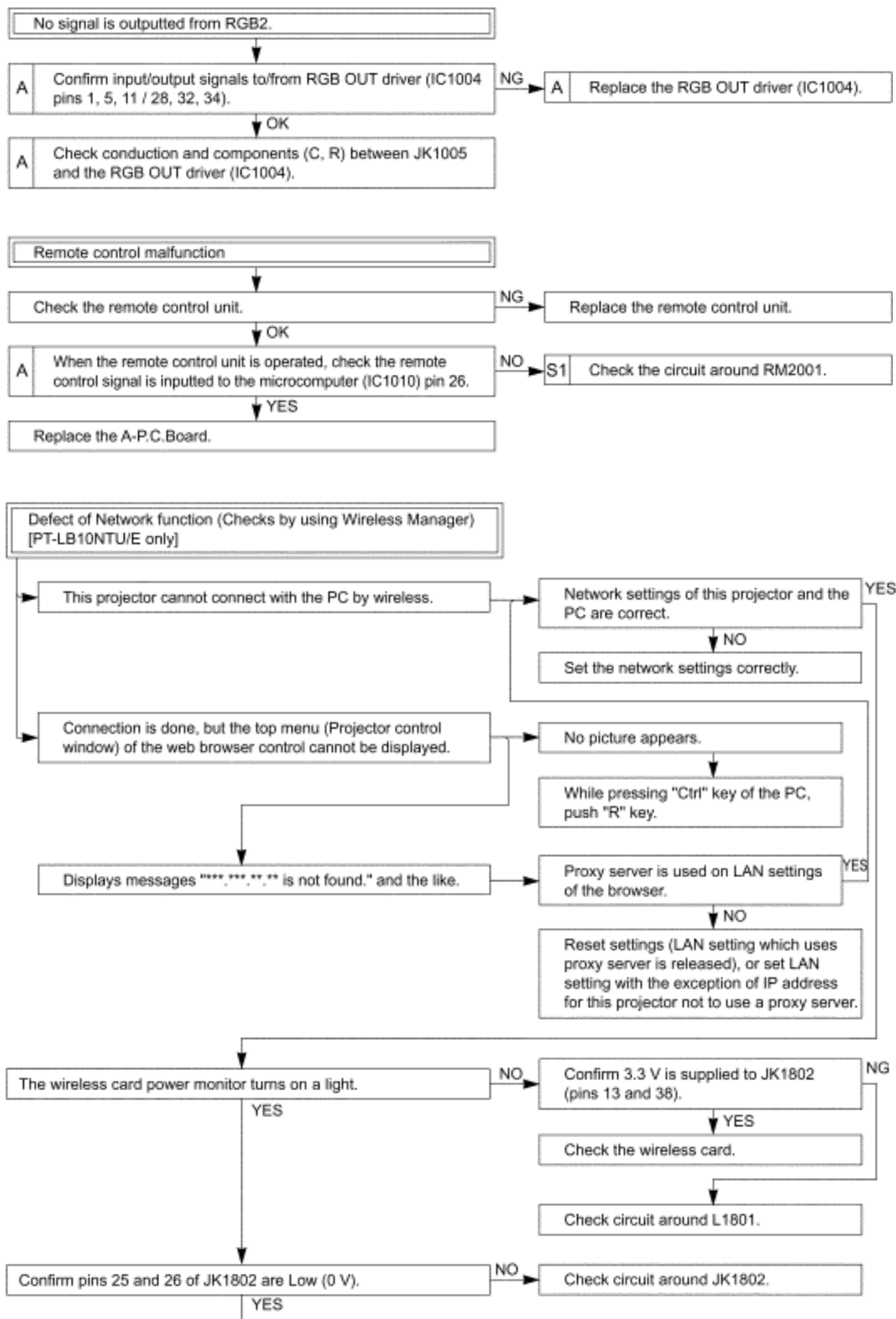
















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# 10 Interconnection Block Diagram

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[10.1 Interconnection Block Diagram \(1 / 2\)](#)

[10.2 Interconnection Block Diagram \(2 / 2\)](#)

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# 10.1 Interconnection Block Diagram (1/2)

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# 10.2 Interconnection Block Diagram (2/2)

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# 11 Block Diagram

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[11.1 Power Supply](#)

[11.2 Signal Processing \(1 / 3\)](#)

[11.3 Signal Processing \(2 / 3\)](#)

[11.4 Signal Processing \(3 / 3\)](#)

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# 11.1 Power Supply

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# 11.2 Signal Processing (1/3)

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# 11.3 Signal Processing (2/3)

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# 11.4 Signal Processing (3/3)

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# 12 Schematic Diagram

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## Schematic Diagram for Model PT-LB10NTU/LB10U/LB10VU/LB10SU

**IMPORTANT SAFETY NOTICE**

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM FIRE AND ELECTRICAL SHOCK HAZARDS.  
WHEN SERVICING, IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.

## Schematic Diagram for Model PT-LB10NTE/LB10E/LB10VE/LB10SE

**Important Safety Notice**

Components identified by the international symbol  have special characteristics important for safety. When replacing any of these components, use only the manufacturer's specified ones.








Notes:

1. **Resistor**

All the resistors are carbon 1/4W resistors, unless marked as follows: The unit of resistance is an OHM [ $\Omega$ ] (K=1 000 M=1 000 000).

-  : Nonflammable
-  : Metal Oxide
-  : Solid
-  : Metal Film
-  : Wire Wound
-  : Fuse

2. **Capacitor**

-  : Temperature Compensation
-  : Electrolytic
-  : Polyester
-  : Bipolar
-  : Metalized Polyester
-  : Dipped Tantalum
-  : Polypropylene
-  : Z-Type

3. **Coil**

The unit of inductance is a H, unless otherwise noted.





4. **Test Point**

-  : Test Point

5. **Voltage Measurement**

The voltage is measured by an electronic voltmeter receiving the colorbar signal when all the customer's controls are set to the standard condition.

6. **Color code for the links between diagrams and circuit boards**

From/To		To/From	Color code
Block diagram		Schematic diagram	Magenta
Schematic diagram		Schematic diagram	Green
Schematic diagram		Circuit boards	Yellow
Schematic diagram		Waveforms	Cyan (Light blue)

7. **HOT and COLD indications**

The power circuit board contains a circuit area using a separate power supply to isolate the ground connection. The circuit is defined by HOT and COLD indications in the schematic diagram. Take the precautions below:

**8. This schematic diagram is the latest at the time of printing and the subject to change without notice.**

**Precautions:**

1. NEVER touch the HOT part or the HOT and COLD parts at the same time, or you may get an electric shock.
2. NEVER short-circuit the HOT and COLD circuits, or the fuse may blow and the parts may break.
3. NEVER connect an instrument such oscilloscope to the HOT and COLD circuit simultaneously, or the fuse may blow. Connect the ground of instruments to the ground of the circuit being measured.
4. MAKE SURE to unplug the power cord from the power outlet before removing the chassis.

[12.1 A-P.C.Board \(1 / 4\)](#)

[12.2 A-P.C.Board \(2 / 4\)](#)

[12.3 A-P.C.Board \(3 / 4\)](#)

[12.4 A-P.C.Board \(4 / 4\)](#)

[12.5 WL-P.C.Board \(1 / 2\)](#)

[12.6 WL-P.C.Board \(2 / 2\)](#)

[12.7 B-Module \(1 / 2\)](#)

[12.8 B-Module \(2 / 2\)](#)

[12.9 K-P.C.Board](#)

[12.10 S1-P.C.Board, S2-P.C.Board](#)

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# 12.1 A-P.C.Board (1/4)

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# 12.2 A-P.C.Board (2/4)

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# 12.3 A-P.C.Board (3/4)

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# 12.4 A-P.C.Board (4/4)

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# 12.5 WL-P.C.Board (1/2)

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# 12.6 WL-P.C.Board (2/2)

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# 12.7 B-Module (1/2)

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# 12.8 B-Module (2/2)

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# 12.9 K-P.C.Board

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# 12.10 S1-P.C.Board, S2-P.C.Board

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# 13 Circuit Boards

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[13.1 A-P.C.Board \(Foil Side\) / WL-P.C.Board \(Foil Side / Component Side\)](#)

[13.2 A-P.C.Board \(Component\) / S1-P.C.Board \(Foil Side / Component Side\)](#)

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# 13.1 A-P.C.Board (Foil Side)/ WL-P.C.Board (Foil Side/Component Side)

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# 13.2 A-P.C.Board (Component)/ S1-P.C.Board (Foil Side/Component Side)

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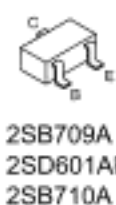
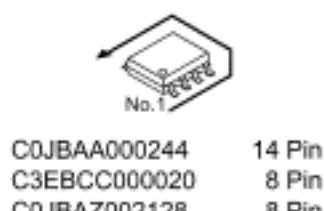
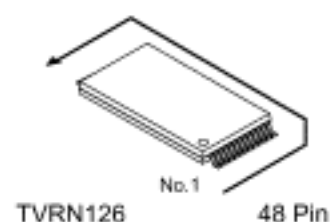
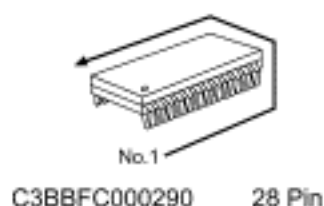
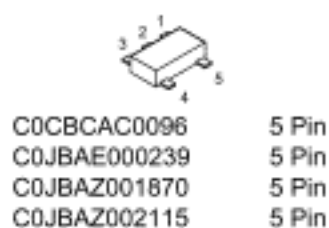
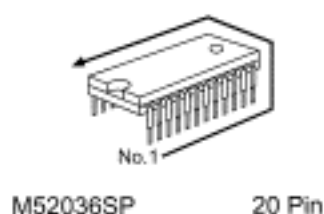
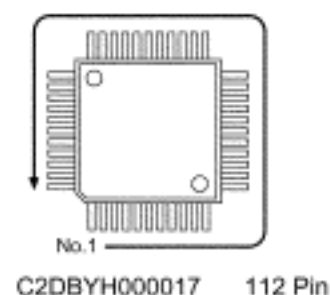
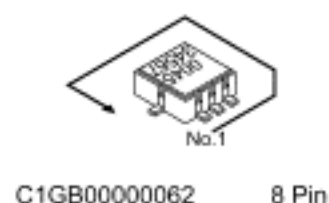
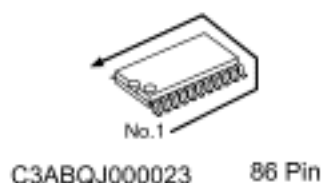
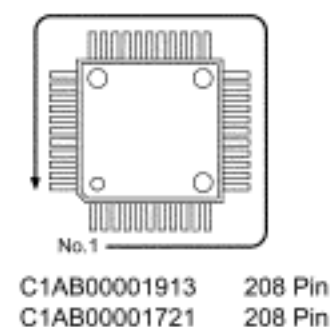
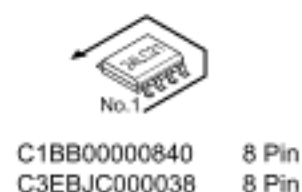
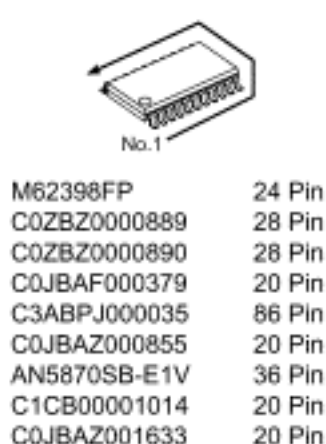
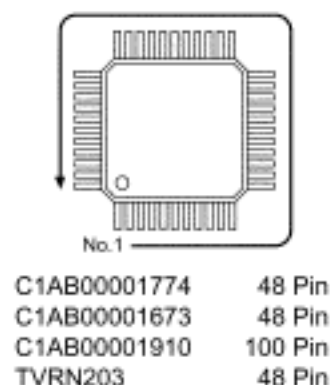


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# 14 Terminal guide of ICs and transistors

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TVRN126

48 Pin

C0JBAA000244

14 Pin

C3EBCC000020

8 Pin

C0JBAZ002126

8 Pin

2SD601AR

2SD601AR

2SB710A

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# 15 Exploded Views

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# 16 Replacement Parts List

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## Important Safety Notice

Components identified by the International symbol  have special characteristics important for safety. When replacing any of these components, use only the manufacturer's specified parts.

### Abbreviation of part name and description

#### 1. Resistor

Example:

ERD25TJ104 C 100KOHM, J, 1/4W

TYPE	ALLOWANCE
C : Carbon	F : - 1 %
F : Fuse	G : - 2 %
M : Metal Oxide	J : - 5 %
Metal Film	K : -10%
S : Solid	M : -20%
W : Wire Wound	

#### 2. Capacitor





Example:








ECKF1H103ZF C 0.01PF, Z, 50V

TYPE	ALLOWANCE
C : Ceramic	C : -0.25 pF
E : Electrolytic	D : -0.5 pF
P : Polyester	F : - 1 pF
PP : Polypropylene	J : - 5 %
S : Polystyrol	K : -10 %
T : Tantalum	L : -15 %
	M : -20 %
	P : +100 %, -0 %
	Z : +80 %, -20 %




### Notes:






Printed circuit board assembly with mark (RTL) is no longer available after production discontinuation of the complete set.

Ref. No.	Part No.	Part Name & Description	Remarks
[MECHANICAL PARTS]			
	D4CDH5030001	THERMISTER	
	J0KG00000036	CORE	
<a href="#">2</a>	K1HA15DA0002	CABLE	
<a href="#">3-1</a>	K2CG3DR00005	POWER CORD	 LB10NTU, LB10U, LB10VU, LB10SU
<a href="#">3-2</a>	K2CM3DR00002	POWER CORD (EUROPE)	 LB10NTE, LB10E, LB10VE, LB10SE
<a href="#">3-3</a>	K2CT3DR00005	POWER CORD (U.K.)	 LB10NTE, LB10E, LB10VE, LB10SE
<a href="#">4</a>	L0AA04C00004	SPEAKER	
<a href="#">5</a>	L5BDAXQ00143	LIQUID CRYSTAL DISPLAY(R)	LB10NTU/E, LB10U/E
	L5BDAXQ00131	LIQUID CRYSTAL DISPLAY(R)	LB10VU/E
	L5BDAXN00073	LIQUID CRYSTAL DISPLAY(R)	LB10SU/E


<u>6</u>	L5BDAXQ00144	LIQUID CRYSTAL DISPLAY(G)	LB10NTU/E, LB10U/E
	L5BDAXQ00132	LIQUID CRYSTAL DISPLAY(G)	LB10VU/E
	L5BDAXN00074	LIQUID CRYSTAL DISPLAY(G)	LB10SU/E
<u>7</u>	L5BDAXQ00145	LIQUID CRYSTAL DISPLAY(B)	LB10NTU/E, LB10U/E
	L5BDAXQ00133	LIQUID CRYSTAL DISPLAY(B)	LB10VU/E
	L5BDAXN00075	LIQUID CRYSTAL DISPLAY(B)	LB10SU/E
<u>8</u>	L6FAJACH0005	POWER FAN	
<u>9</u>	L6FAKDEH0005	VENTILATION FAN	
<u>10</u>	L6FCHC9H0002	PBS FAN	
<u>11</u>	L6FCKEAH0002	SIROCCO FAN	
<u>12</u>	L6FCKEBH0002	SIROCCO FAN	
<u>13</u>	N5HBD0000028	LAN CARD	 LB10NTU
	N5HBD0000029	LAN CARD	 LB10NTE
<u>14</u>	TBLB0046	ADJUST LEG	
<u>15</u>	TBLG3063	RUBBER LEG (REAR)	
<u>16</u>	TBMA150	PANASONIC BADGE	
	TBMF414	MODEL NAME PLATE	LB10NTU
	TBMF415	MODEL NAME PLATE	LB10NTE
	TBMF417	MODEL NAME PLATE	LB10U
	TBMF418	MODEL NAME PLATE	LB10E
	TBMF420	MODEL NAME PLATE	LB10VU
	TBMF421	MODEL NAME PLATE	LB10VE
	TBMF570	MODEL NAME PLATE	LB10SU
	TBMF571	MODEL NAME PLATE	LB10SE
	TBMF423	MODEL NO. LABEL	LB10NTU
	TBMF424	MODEL NO. LABEL	LB10NTE
	TBMF426	MODEL NO. LABEL	LB10U
	TBMF427	MODEL NO. LABEL	LB10E
	TBMF429	MODEL NO. LABEL	LB10VU
	TBMF430	MODEL NO. LABEL	LB10VE
	TBMF573	MODEL NO. LABEL	LB10SU
	TBMF574	MODEL NO. LABEL	LB10SE
<u>17</u>	TBXA38201-1	CONTROL BUTTON	

<a href="#">18</a>	TBXA38301-1	CURSOR BUTTON	
<a href="#">19</a>	TEEC5112	DUCT 1	
<a href="#">20</a>	TEEC5148	DUCT 2	
<a href="#">21</a>	TEEC5149	DUCT 3	
	THEA124N	SCREW	LB10NTU/E
<a href="#">22</a>	THEC035N	SCREW	
<a href="#">23</a>	TKGF0088-1	PBS	
<a href="#">24</a>	TKGF0092-1	LENS	LB10NTU/E, LB10U/E, LB10SU/E
	TKGF0093	LENS	LB10VU/E
<a href="#">25</a>	TKGP5226	POLARIZING PLATE/OUT(R)	
<a href="#">26</a>	TKGP5227	POLARIZING PLATE/OUT(G)	
<a href="#">27</a>	TKGP5228-1	POLARIZING PLATE/OUT(B)	
<a href="#">28</a>	TKGP5229	POLARIZING PLATE/IN(R)	
<a href="#">29</a>	TKGP5230	POLARIZING PLATE/IN(G)	
<a href="#">30</a>	TKGP5231	POLARIZING PLATE/IN(B)	
<a href="#">31</a>	TKKC5142	REMOTE RECEIVER PLATE(F)	
<a href="#">32</a>	TKKC5167	LED PLATE	
<a href="#">33</a>	TKKL5297	LENS CAP	
	TKLA0701	6 ANGLE WRENCH	LB10NTU/E
<a href="#">34</a>	TKNE051	FILTER	
<a href="#">35</a>	TKPA75202	BUTTON DECORATION BOARD	LB10NTU/E, LB10U/E, LB10SU/E
	TKPA75201	BUTTON DECORATION BOARD	LB10VU/E
<a href="#">36</a>	TKPA86901	TERMINAL COVER	
<a href="#">37</a>	TKXA17301	CARD LOCK	LB10NTU/E
<a href="#">38</a>	TKZF5034	TERMINAL METAL	
<a href="#">39</a>	TKZJ5053	VENTILATION FAN METAL	
	TKZJ5054	FAN GUARD METAL	
	TMKG389	FAN SPONGE	
	TMKG396-1	SPEAKER SPACER	
	TMKG422	SPACER	
<a href="#">41</a>	TMKX100	WASHER	
	TMKX511	SHELTER SHEET	
<a href="#">42</a>	TMKX661	POWER INSULATION SHEET	
<a href="#">43</a>	TMKX662	BALLAST INSULATION SHEET	

<a href="#">44</a>	TMKX663	VENTILATION FAN GUARD	
<a href="#">45</a>	TMKX664	INSULATION SHEET (K-PCB)	
	TMKX665	GUIDE PLATE	
<a href="#">46</a>	TMKX689	POWER FAN COVER	
<a href="#">47</a>	TMKX703	SHEET	
<a href="#">48</a>	TMXC020	TEMP FUSE METAL	
<a href="#">49</a>	TMXE034-1	HOLDER	
<a href="#">50</a>	TMZK5021	SPEAKER BOX	
<a href="#">51</a>	TMZX5034	FILTER COVER	
<a href="#">52</a>	TNQE239	REMOTE CONTROLLER	
<a href="#">53</a>	TPCB57402	CARTON	LB10NTU
	TPCB57403	CARTON	LB10NTE
	TPCB57405	CARTON	LB10U
	TPCB57406	CARTON	LB10E
	TPCB57408	CARTON	LB10VU
	TPCB57409	CARTON	LB10VE
	TPCB57412	CARTON	LB10SU
	TPCB57413	CARTON	LB10SE
<a href="#">54</a>	TPDF1041	CUSHION 1	
<a href="#">55</a>	TPDF1042	ACCESSORY CARTON	
<a href="#">56</a>	TPDF1066	CUSHION 2	
<a href="#">57</a>	TPEH124-1	SET COVER	
<a href="#">58</a>	TPEP013	CARRING CASE	
	TQB817002-1	SAFETY SHEET	LB10NTU, LB10U, LB10VU, LB10SU
<a href="#">60</a>	TQBH0149	INSTRUCTION BOOK (SUB)	 LB10NTU/E
<a href="#">61</a>	TQBH7017	SHEET (PASSWORD)	
<a href="#">59</a>	TQBJ0141	INSTRUCTION BOOK	 LB10NTU, LB10U, LB10VU, LB10SU
	TQBJ0142	INSTRUCTION BOOK	 LB10NTE, LB10E, LB10VE, LB10SE
	TQD1712010	LABEL	
	TQDJ18004	GUARANTEE CARD (CANADA)	LB10NTU, LB10U, LB10VU, LB10SU
	TQDJ18015-6	GUARANTEE CARD (USA)	LB10NTU, LB10U, LB10VU, LB10SU
	TQDJ19009	SIMPLE SHEET	LB10NTU
	TQDJ19010	SIMPLE SHEET (U.K,SPAIN)	LB10NTE

	TQDJ19011	SIMPLE SHEET (FRANCE,ITALY)	LB10NTE
	TQDJ19012	SIMPLE SHEET (GERMANY,KOREA)	LB10NTE
	TQF86202	LABEL	
	TSKA159	CORE	J0KG00000011
	TSXL405	FLEX CABLE	
	TUCB5027	ALUMINUM SHEET	
<a href="#">62</a>	TUCX5161	EARTH METAL 1	
<a href="#">63</a>	TUCX5162	EARTH METAL 2	
<a href="#">64</a>	TUCX5163	EARTH METAL(A-PCB)	
<a href="#">65</a>	TUCX5164	EARTH METAL(WL-PCB)	
<a href="#">66</a>	TUWC051	INTERLOCK METAL	
<a href="#">67</a>	TUWC052	METAL	
<a href="#">68</a>	TXFEE01VJW5	LAMP HOUSE	
<a href="#">69</a>	TXFKL01VJW5	LAMP COVER ASSY	
	TXJ/B1VJW5	LEAD WIRE (B1-P2)	
	TXJ/L2VJW5	LAMP CABLE	
	TXJ/P1VJW5	LEAD WIRE (K1-P1)	
	TXJ/P3VJW5	LEAD WIRE (P3-A6)	
	TXJ/Q3VJW5	LEAD WIRE (Q3-A4)	
	XSB3+8FN	SCREW	
<a href="#">70</a>	XTBT969Z	SCREW	
	XTN3+6G	SCREW	
	XTW3+8P	TAPPING SCREW	
	XYN2+F6	SCREW	
	XYN2+J10	SCREW	
	XYN3+F10	SCREW	
	XYN3+F14	SCREW	
	XYN3+F30FZ	SCREW	
	XYN3+F8	SCREW	LB10NTU/E
	XYN3+J8	SCREW	
	XYN4+E8	SCREW	
<a href="#">71</a>	XZBT6532	POLY BAG	LB10NTU/E, LB10U, LB10VU
<a href="#">72</a>	TXFKF99PVMZ	UPPER COVER	LB10NTU/E
	TXFKF99PVNZ	UPPER COVER	LB10U/E, LB10SU/E
	TXFKF99PVPZ	UPPER COVER	LB10VU/E




73	TXFKF98PVMZ	BOTTOM COVER	LB10NTU
	TXFKF98PVQZ	BOTTOM COVER	LB10NTE
	TXFKF98PVNZ	BOTTOM COVER	LB10U
	TXFKF99PVRZ	BOTTOM COVER	LB10E
	TXFKF98PVPZ	BOTTOM COVER	LB10VU
	TXFKF99PVSZ	BOTTOM COVER	LB10VE
	TXFKF99PXAZ	BOTTOM COVER	LB10SU
	TXFKF99PXBZ	BOTTOM COVER	LB10SE
74	TXFEC98VJW5	ANALYSIS BLOCK	
75	TXFEC99VJW5	OPTICAL BLOCK	LB10NTU/E, LB10U/E
	TXFEC99VJW7	OPTICAL BLOCK	LB10VU/E
	TXFEC99PXAZ	OPTICAL BLOCK	LB10SU/E
76	TXFQB99VJW5	CD-ROM	 LB10NTU/E
[INTEGRATED CIRCUIT]			
IC1001	C1AB00001988	I.C	
IC1002	C0JBAA000233	I.C	
IC1003	M52036SP	I.C	C1AA00000392
IC1004	AN5870SB	I.C	
IC1005	C1AB00001913	I.C	
IC1006	C3ABPJ000035	I.C	
IC1009	C0ZBZ0000890	I.C	
IC1010	C2DBYH000017	I.C	
IC1011	TVRN126	I.C	LB10NTU/E, LB10U/E, LB10VU/E
	TVRN266	I.C	LB10SU/E
IC1012	74LVC574APWL	I.C	C0JBAF000379
IC1013	C0JBAE000239	I.C	
IC1015	74LVC574APWL	I.C	C0JBAF000379
IC1016	C0EBE0000336	I.C	
IC1017	C3EBJC000038	I.C	
IC1018	C1GB00000062	I.C	
IC1019	C0CBCAC00096	I.C	
IC1020	C0JBAA000345	I.C	
IC1021	M62398FP	I.C	C0FBBD000087
IC1023	C0JBAE000239	I.C	
IC1024	24LC21T-I/SN	I.C	C3EBCC000020
IC1025	C0JBAA000345	I.C	

IC1026	C1BB00000840	I.C	
IC1027	C3BBFC000290	I.C	LB10NTU/E
IC1028	C0DBZJD00003	I.C	
IC1029	C0DBEZE00002	I.C	
IC1030	C0DBEZE00002	I.C	
IC1031	C0DBEZE00002	I.C	
IC1032	C0DBEZE00002	I.C	
IC1033	C0JBAZ001633	I.C	LB10NTU/E
IC1034	C0JBAZ001633	I.C	LB10NTU/E
IC1035	C0JBAZ001633	I.C	LB10NTU/E
IC1037	C0DBZFF00003	I.C	
IC1038	C0JBAZ001870	I.C	
IC1039	C0JBAZ002115	I.C	
IC1040	C0DBZFF00004	I.C	
IC1041	C0DBZHD00005	I.C	
IC1042	C0DBZGF00002	I.C	
IC1043	C0DBZFD00018	I.C	
IC1050	C0DBEKG00004	I.C	
IC1051	C1AB00001774	I.C	
IC1052	C1AB00001774	I.C	
IC1053	C1AB00001774	I.C	
IC1057	C1AB00001673	I.C	
IC1058	C1AB00001673	I.C	
IC1059	C1AB00001673	I.C	
IC1068	C0JBAZ000855	I.C	
IC1070	C1CB00001014	I.C	
IC1072	AN78L05M	I.C	
IC1083	C0JBAZ002128	I.C	
IC1200	C1AB00001721	I.C	
IC1802	C3ABQJ000023	I.C	LB10NTU/E
IC1803	TVRN203	I.C	LB10NTU/E
IC1804	TVRN150	I.C	LB10NTU/E
IC1805	C2GBC0000199	I.C	LB10NTU/E
IC1806	C0DBFFD00003	I.C	LB10NTU/E
IC9602	C0ZAZ0000077	I.C	
IC9603	C0ZAZ0000077	I.C	
[TRANSISTORS]			

Q1006	2SD1819A0L	TRANSISTOR	
Q1007	2SB1218A0L	TRANSISTOR	
Q1008	2SD1819A0L	TRANSISTOR	
Q1009	2SD1819A0L	TRANSISTOR	
Q1011	2SB1218A0L	TRANSISTOR	
Q1012	2SD1819A0L	TRANSISTOR	
Q1013	2SD1819A0L	TRANSISTOR	
Q1014	2SB1218A0L	TRANSISTOR	
Q1017	2SD1819A0L	TRANSISTOR	
Q1019	2SD1819A0L	TRANSISTOR	
Q1020	2SD1819A0L	TRANSISTOR	
Q1021	2SD1819A0L	TRANSISTOR	
Q1022	B1DHDD000020	TRANSISTOR	
Q1027	2SD1819A0L	TRANSISTOR	
Q1032	2SD1819A0L	TRANSISTOR	
Q1033	2SD1819A0L	TRANSISTOR	
Q1034	2SD1819A0L	TRANSISTOR	
Q1035	2SD1819A0L	TRANSISTOR	
Q1036	2SB1218A0L	TRANSISTOR	
Q1038	B1CBHD000001	TRANSISTOR	
Q1039	B1CBHD000001	TRANSISTOR	
Q1040	2SD1819A0L	TRANSISTOR	
Q1041	2SD1819A0L	TRANSISTOR	
Q1042	2SD1819A0L	TRANSISTOR	
Q1043	2SD1819A0L	TRANSISTOR	
Q2001	2SD601A-R	TRANSISTOR	2SD0601AR
Q2002	2SD601A-R	TRANSISTOR	2SD0601AR
Q2003	2SD601A-R	TRANSISTOR	2SD0601AR
Q2004	2SB709A	TRANSISTOR	2SB0709A
Q2005	2SB709A	TRANSISTOR	2SB0709A
Q9603	B1DEGQ000017	TRANSISTOR	
Q9604	2SB710A	TRANSISTOR	2SB0710A
Q9605	2SB710A	TRANSISTOR	2SB0710A
Q9606	B1DEGM000022	TRANSISTOR	
Q9607	B1DEGM000022	TRANSISTOR	
Q9608	2SB710A	TRANSISTOR	2SB0710A
Q9609	2SB710A	TRANSISTOR	2SB0710A
Q9610	B1DEGM000022	TRANSISTOR	
Q9611	B1DEGM000022	TRANSISTOR	

Q9614	B1DEGQ000017	TRANSISTOR	
[DIODES]			
D1001	MAZ80560ML	DIODE	
D1002	MAZ81500ML	DIODE	
D1003	MAZ81500ML	DIODE	
D1004	MAZ81500ML	DIODE	
D1005	MAZ81500ML	DIODE	
D1009	MAZ80560ML	DIODE	
D1010	MAZ80560ML	DIODE	
D1011	MAZ80560ML	DIODE	
D1012	MAZ80560ML	DIODE	
D1016	MAZ80560ML	DIODE	
D1017	MAZ80560ML	DIODE	
D1018	MAZ80560ML	DIODE	
D1019	MA157A	DIODE	MA3X157A
D1021	MAZ80560ML	DIODE	
D1022	MA157A	DIODE	MA3X157A
D1023	MA157A	DIODE	MA3X157A
D1024	MA157A	DIODE	MA3X157A
D1026	MA157A	DIODE	MA3X157A
D1028	MA157A	DIODE	MA3X157A
D1034	MA157A	DIODE	MA3X157A
D1035	MA157A	DIODE	MA3X157A
D1036	B0JCPD000010	DIODE	
D1037	B0JCPD000010	DIODE	
D1038	MA3X152E0L	DIODE	
D1039	LNJ208R8ARA	LED	
D1041	MA2S11100L	DIODE	
D1042	MAZY12000L	DIODE	
D1043	B0HCMM000001	DIODE	
D1065	D4CC1103A037	THERMISTOR	
D2001	B3AAB0000168	DIODE	
D2002	B3AAB0000168	DIODE	
D2003	B3ABB0000181	DIODE	
D2004	LNJ107W5ARA1	LED	
D2005	MA157A	DIODE	MA3X157A

D9101	ERZV10D751	VARISTOR	
D9601	B0HASR000006	DIODE	
D9604	MA158	DIODE	MA3X158
D9605	MA2Z72000L	DIODE	
D9606	MA158	DIODE	MA3X158
D9607	MA2Z72000L	DIODE	
D9608	MA158	DIODE	MA3X158
D9609	MA2Z72000L	DIODE	
D9611	MA158	DIODE	MA3X158
D9612	MA2Z72000L	DIODE	
D9616	D1FL40F4063	DIODE	B0ECHP000001
D9617	MA2Z72000L	DIODE	
D9618	MA2Z72000L	DIODE	
D9619	MA2Z72000L	DIODE	
D9629	MA2Z72000L	DIODE	
D9621	MA2Z72000L	DIODE	
D9622	D1FL40F4063	DIODE	B0ECHP000001
D9623	D1FL40F4063	DIODE	B0ECHP000001
D9624	MA2Z72000L	DIODE	
D9625	MA2Z72000L	DIODE	
D9626	MA2Z72000L	DIODE	
D9627	MA2Z72000L	DIODE	
D9628	MA2Z72000L	DIODE	
D9629	D1FL40F4063	DIODE	B0ECHP000001
[COILS]			
L1001	J0JCC0000168	FILTER	
L1002	J0JCC0000168	FILTER	
L1003	J0JCC0000168	FILTER	
L1004	J0JCC0000168	FILTER	
L1005	J0JJC0000022	EMI FILTER	
L1006	ELJFA150JF	COIL	
L1007	ELJFA150JF	COIL	
L1008	J0JJC0000022	EMI FILTER	
L1009	J0JCC0000168	FILTER	
L1010	J0JJC0000022	EMI FILTER	
L1011	J0JJC0000022	EMI FILTER	

L1012	J0JJC0000022	EMI FILTER	
L1014	J0JCC0000168	FILTER	
L1015	J0JJC0000022	EMI FILTER	
L1016	J0JCC0000168	FILTER	
L1017	J0JJC0000022	EMI FILTER	
L1018	J0JJC0000022	EMI FILTER	
L1019	J0JJC0000022	EMI FILTER	
L1020	J0JJC0000022	EMI FILTER	
L1021	EZASCE101M	CAPACITOR ARRAY	LB10NTU/E
L1022	EZASCE101M	CAPACITOR ARRAY	LB10NTU/E
L1023	EZASCE101M	CAPACITOR ARRAY	LB10NTU/E
L1024	EZASCE101M	CAPACITOR ARRAY	LB10NTU/E
L1025	EZASCE101M	CAPACITOR ARRAY	LB10NTU/E
L1026	EZASCE101M	CAPACITOR ARRAY	LB10NTU/E
L1027	J0JJC0000022	EMI FILTER	
L1028	J0JJC0000022	EMI FILTER	LB10NTU/E
L1029	J0JJC0000022	EMI FILTER	LB10NTU/E
L1030	J0JJC0000022	EMI FILTER	LB10NTU/E
L1031	J0JJC0000022	EMI FILTER	
L1032	J0JJC0000022	EMI FILTER	
L1033	ELJFA470JF	COIL	
L1034	J0JJC0000022	EMI FILTER	
L1035	J0JCC0000238	FILTER	LB10NTU/E, LB10U/E, LB10VU/E
	J0JCC0000168	FILTER	LB10SU/E
L1036	ELJFA6R8JB	CHIP COIL	
L1037	ELJFA470JF	COIL	
L1038	J0JJC0000022	EMI FILTER	
L1039	J0JCC0000238	FILTER	LB10NTU/E, LB10U/E, LB10VU/E
	J0JCC0000168	FILTER	LB10SU/E
L1040	J0JJC0000022	EMI FILTER	
L1041	J0JJC0000022	EMI FILTER	
L1042	J0JJC0000022	EMI FILTER	
L1043	J0JJC0000022	EMI FILTER	
L1044	J0JJC0000022	EMI FILTER	
L1045	J0JCC0000238	FILTER	LB10NTU/E, LB10U/E, LB10VU/E
	J0JCC0000168	FILTER	LB10SU/E
L1046	J0JCC0000238	FILTER	LB10NTU/E, LB10U/E, LB10VU/E
	J0JCC0000168	FILTER	LB10SU/E
L1047	J0JJC0000022	EMI FILTER	

L1048	J0JJC0000022	EMI FILTER	
L1049	J0JJC0000022	EMI FILTER	
L1050	J0JJC0000022	EMI FILTER	
L1051	J0JJC0000022	EMI FILTER	
L1052	J0JJC0000022	EMI FILTER	
L1053	J0JJC0000022	EMI FILTER	
L1054	ERJ3GEY0R00	M 0 OHM, 1/16W	
L1055	J0JJC0000022	EMI FILTER	
L1056	ERJ3GEY0R00	M 0 OHM, 1/16W	
L1057	J0JJC0000022	EMI FILTER	
L1058	ERJ3GEY0R00	M 0 OHM, 1/16W	
L1059	J0JJC0000022	EMI FILTER	
L1060	J0JJC0000022	EMI FILTER	
L1061	J0JJC0000022	EMI FILTER	
L1062	J0JJC0000022	EMI FILTER	
L1063	J0JJC0000022	EMI FILTER	
L1064	J0JJC0000022	EMI FILTER	
L1066	J0JCC0000168	FILTER	
L1067	J0JCC0000168	FILTER	
L1068	J0JCC0000168	FILTER	
L1069	J0JCC0000168	FILTER	
L1070	J0JCC0000168	COIL	
L1071	J0JCC0000168	COIL	
L1072	J0JCC0000168	COIL	
L1073	J0JCC0000168	COIL	
L1074	J0JCC0000168	COIL	
L1075	J0JCC0000168	COIL	
L1077	J0JCC0000168	COIL	
L1082	J0JJC0000022	EMI FILTER	LB10NTU/E
L1801	EXCML16A270	COIL	LB10NTU/E
L1803	J0JBD0000007	COIL	LB10NTU/E
L1804	J0JBD0000007	COIL	LB10NTU/E
L1805	J0JBD0000007	COIL	LB10NTU/E
L1806	J0JBD0000007	COIL	LB10NTU/E
L1807	J0JBD0000007	COIL	LB10NTU/E
L1808	J0JBD0000007	COIL	LB10NTU/E
L1809	J0JBD0000007	COIL	LB10NTU/E
L1810	J0JBD0000007	COIL	LB10NTU/E
LC1801	EZASCE101M	CAPACITOR ARRAY	LB10NTU/E

LF9001	G0B592H00001	COIL	
LF9002	G0B592H00001	COIL	
LF9101	G0B592H00001	COIL	
LF9102	G0B592H00001	COIL	
[RESISTORS]			
R1001	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1016	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R1017	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R1021	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002
R1022	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002
R1024	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1025	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1027	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1029	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1030	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1039	ERJ2GEJ100	M 10 OHM, 0.063W	
R1041	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1042	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1044	ERJ3GEYJ223	M 22K OHM,J,1/16W	
R1045	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1047	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1048	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1049	ERJ3GEYJ183	M 18K OHM,J,1/16W	
R1050	ERJ3GEYJ223	M 22K OHM,J,1/16W	
R1051	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1052	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1053	ERJ3GEYJ5R1	M 5.1 OHM,J,1/16W	
R1054	ERJ3GEYJ5R1	M 5.1 OHM,J,1/16W	
R1055	ERJ3GEYJ5R1	M 5.1 OHM,J,1/16W	
R1056	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1057	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1058	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1059	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1060	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1061	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1064	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	



R1065	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1070	ERJ3GEYJ681	M 680 OHM,J,1/16W	
R1071	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1072	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1073	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1074	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1075	ERJ3GEYJ681	M 680 OHM,J,1/16W	
R1078	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1079	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1081	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1082	ERJ3GEYJ682	M 6.8KOHM,J,1/16W	
R1083	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1084	ERJ3GEYJ122	M 1.2KOHM,J,1/16W	
R1085	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R1087	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1088	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1089	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1090	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1091	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1092	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1093	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1094	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002
R1095	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002
R1098	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1100	ERJ3GEYJ223	M 22K OHM,J,1/16W	
R1102	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1103	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002
R1104	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002
R1105	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1106	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1107	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1108	ERJ3GEYJ223	M 22K OHM,J,1/16W	
R1109	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1113	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1114	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1115	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1116	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1117	ERJ3GEYJ223	M 22K OHM,J,1/16W	
R1118	ERJ3GEYJ223	M 22K OHM,J,1/16W	

R1121	ERJ3GEYJ180	M 18 OHM,J,1/16W	
R1122	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002
R1123	ERJ3GEYJ180	M 18 OHM,J,1/16W	
R1128	ERJ3GEYJ180	M 18 OHM,J,1/16W	
R1142	ERJ6ENF2001	M 2KOHM, 1/10W	
R1143	ERJ8ENF1501	M 1.5KOHM, 1/8W	
R1144	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1145	ERJ6ENF39R0	M 39 OHM, 1/10W	
R1147	ERJ3GEYJ180	M 18 OHM,J,1/16W	
R1148	ERJ6ENF2700	M 270 OHM, 1/10W	
R1151	ERJ3EKF1002	M 10K OHM, 1/16W	
R1154	ERJ3EKF3302	M 33K OHM, 1/16W	
R1155	ERJ3GEYJ180	M 18 OHM,J,1/16W	
R1156	ERJ3GEYJ180	M 18 OHM,J,1/16W	
R1163	ERJ3GEYJ391	M 390 OHM,J,1/16W	D0GB391JA002
R1164	ERJ3EKF1371	M 1.37KOHM,0.063W	
R1165	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1166	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1167	ERJ6ENF2001	M 2KOHM, 1/10W	
R1168	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1169	ERJ2GEJ220	M 22 OHM, 0.063W	
R1170	ERJ8ENF1501	M 1.5KOHM, 1/8W	
R1171	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1172	ERJ6ENF39R0	M 39 OHM, 1/10W	
R1173	ERJ3EKF1741	M 1.74KOHM,0.063W	
R1174	ERJ2GE0R00	M 0 OHM, 0.063W	
R1175	ERJ6ENF2700	M 270 OHM, 1/10W	
R1177	ERJ2GEJ220	M 22 OHM, 0.063W	
R1178	ERJ2GEJ220	M 22 OHM, 0.063W	
R1179	ERJ2GEJ220	M 22 OHM, 0.063W	
R1180	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1181	ERJ3EKF1002	M 10K OHM, 1/16W	
R1182	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1183	ERJ3EKF3302	M 33K OHM, 1/16W	
R1184	ERJ2GEJ220	M 22 OHM, 0.063W	
R1188	ERJ3GEYJ392	M 3.9KOHM,J,1/16W	
R1189	ERJ3GEYJ105	M 1M OHM,J,1/16W	
R1190	ERJ3GEYJ822	M 8.2KOHM,J,1/16W	
R1191	ERJ3GEYJ183	M 18K OHM,J,1/16W	

R1192	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1193	EXB28V220J	RESISTOR ARRAY	
R1194	EXB28V220J	RESISTOR ARRAY	
R1195	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1196	EXB28V560J	RESISTOR ARRAY	
R1197	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1199	ERJ6ENF2001	M 2KOHM, 1/10W	
R1200	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1201	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1202	ERJ3GEYJ183	M 18K OHM,J,1/16W	
R1203	ERJ8ENF1201	M 1.2KOHM, 1/8W	
R1204	ERJ3EKF3302	M 33K OHM, 1/16W	
R1205	ERJ6ENF39R0	M 39 OHM, 1/10W	
R1206	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1208	ERJ6ENF2702	M 27KOHM, 1/10W	
R1209	ERJ6ENF2700	M 270 OHM, 1/10W	
R1210	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1211	ERJ3EKF1002	M 10K OHM, 1/16W	
R1212	EXB28V560J	RESISTOR ARRAY	
R1213	EXB28V560J	RESISTOR ARRAY	
R1214	ERJ2GEJ220	M 22 OHM, 0.063W	
R1216	EXB28V220J	RESISTOR ARRAY	
R1217	ERJ3GEYJ182	M 1.8KOHM,J,1/16W	
R1218	ERJ3GEYJ272	M 2.7KOHMJ,J1/16W	
R1219	ERJ3GEYJ182	M 1.8KOHM,J,1/16W	
R1221	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1222	ERJ6ENF2001	M 2KOHM, 1/10W	
R1223	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1224	ERJ8ENF1201	M 1.2KOHM, 1/8W	
R1225	ERJ3EKF3302	M 33K OHM, 1/16W	
R1226	ERJ6ENF39R0	M 39 OHM, 1/10W	
R1227	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1228	ERJ6ENF2700	M 270 OHM, 1/10W	
R1229	ERJ3EKF1002	M 10K OHM, 1/16W	
R1230	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1231	ERJ3GEYJ391	M 390 OHM,J,1/16W	D0GB391JA002
R1237	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1238	ERJ2GEJ101	M 100 OHM, 0.063W	
R1240	ERJ2GEJ472	M 4.7KOHM, 0.063W	

R1241	ERJ2GEJ220	M 22 OHM, 0.063W	
R1242	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1244	ERJ2GEJ220	M 22 OHM, 0.063W	
R1246	ERJ2GEJ681	M 680 OHM, 0.063W	
R1247	ERJ2GEJ681	M 680 OHM, 0.063W	
R1248	ERJ2GEJ103	M 10K OHM, 0.063W	LB10NTU/E
R1249	ERJ2GEJ220	M 22 OHM, 0.063W	
R1250	ERJ2GEJ220	M 22 OHM, 0.063W	
R1251	ERJ2GEJ220	M 22 OHM, 0.063W	
R1252	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1253	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1254	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1255	ERJ2GEJ101	M 100 OHM, 0.063W	
R1257	ERJ2GEJ220	M 22 OHM, 0.063W	
R1260	EXB28V220J	RESISTOR ARRAY	LB10NTU/E
R1261	EXB28V220J	RESISTOR ARRAY	LB10NTU/E
R1262	EXB28V220J	RESISTOR ARRAY	LB10NTU/E
R1263	EXB28V220J	RESISTOR ARRAY	LB10NTU/E
R1264	EXB28V220J	RESISTOR ARRAY	LB10NTU/E
R1265	EXB28V220J	RESISTOR ARRAY	LB10NTU/E
R1266	EXB28V560J	RESISTOR ARRAY	
R1268	ERJ2GEJ220	M 22 OHM, 0.063W	
R1270	EXB28V560J	RESISTOR ARRAY	
R1271	EXB28V560J	RESISTOR ARRAY	
R1272	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1273	EXB28V560J	RESISTOR ARRAY	
R1274	EXB28V560J	RESISTOR ARRAY	
R1275	EXB28V560J	RESISTOR ARRAY	
R1276	EXB28V560J	RESISTOR ARRAY	
R1277	EXB28V560J	RESISTOR ARRAY	
R1278	EXB28V560J	RESISTOR ARRAY	
R1281	ERJ2GEJ220	M 22 OHM, 0.063W	
R1282	ERJ3GEYJ681	M 680 OHM,J,1/16W	
R1285	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1290	ERJ3GEYJ301	M 300 OHM,J,1/16W	
R1291	ERJ2GEJ102	M 1K OHM, 0.063W	
R1295	ERJ6ENF1203	M 120KOHM, 1/10W	
R1298	ERJ6ENF1203	M 120KOHM, 1/10W	
R1299	ERJ3GEYJ220	M 22 OHM,J,1/16W	



R1300	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1301	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1302	ERJ2GE0R00	M 0 OHM, 0.063W	LB10NTU/E, LB10U/E, LB10VU/E
R1303	ERJ2GE0R00	M 0 OHM, 0.063W	LB10NTU/E, LB10U/E, LB10VU/E
R1304	ERJ2GEJ103	M 10K OHM, 0.063W	
R1305	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1306	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1308	ERJ6ENF1004	M1000KOHM, 1/10W	
R1309	ERJ2GEJ103	M 10K OHM, 0.063W	
R1310	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1311	ERJ2GEJ221	M 220 OHM, 0.063W	
R1312	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1313	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1314	ERJ2GEJ221	M 220 OHM, 0.063W	
R1315	ERJ2GEJ272	M 2.7KOHM, 0.063W	
R1321	ERJ2GEJ101	M 100 OHM, 0.063W	
R1322	ERJ2GEJ220	M 22 OHM, 0.063W	
R1323	EXB28V103J	RESISTOR ARRAY	
R1325	EXB28V103J	RESISTOR ARRAY	
R1326	ERJ2GEJ105	M 1M OHM, 0.063W	LB10NTU/E, LB10U/E
R1328	EXB28V103J	RESISTOR ARRAY	
R1331	ERJ2GEJ105	M 1M OHM, 0.063W	
R1332	EXB28V103J	RESISTOR ARRAY	
R1333	EXB28V103J	RESISTOR ARRAY	
R1334	ERJ2GEJ220	M 22 OHM, 0.063W	
R1335	ERJ2GEJ220	M 22 OHM, 0.063W	
R1336	ERJ2GEJ102	M 1K OHM, 0.063W	
R1337	ERJ2GEJ105	M 1M OHM, 0.063W	
R1338	ERJ2GEJ102	M 1K OHM, 0.063W	
R1339	ERJ2GEJ103	M 10K OHM, 0.063W	
R1340	ERJ2GEJ101	M 100 OHM, 0.063W	
R1346	ERJ2GEJ103	M 10K OHM, 0.063W	
R1348	EXB28V220J	RESISTOR ARRAY	
R1349	ERJ2GEJ220	M 22 OHM, 0.063W	
R1355	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1356	ERJ2GEJ103	M 10K OHM, 0.063W	
R1357	ERJ6GEYJ100	M 10 OHM,J,1/10W	
R1358	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1359	EXB28V220J	RESISTOR ARRAY	

R1360	ERJ6GEYJ100	M 10 OHM,J,1/10W	
R1361	EXB28V220J	RESISTOR ARRAY	
R1362	ERJ6GEYJ560	M 56 OHM,J,1/10W	
R1363	EXB28V220J	RESISTOR ARRAY	
R1364	ERJ2GEJ220	M 22 OHM, 0.063W	
R1365	ERJ6ENF6801	M 6.8KOHM, 1/10W	
R1366	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1367	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1368	ERJ2GEJ220	M 22 OHM, 0.063W	
R1370	ERJ6ENF6801	M 6.8KOHM, 1/10W	
R1372	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1373	ERJ2GEJ220	M 22 OHM, 0.063W	
R1374	EXB28V220J	RESISTOR ARRAY	
R1376	ERJ2GEJ221	M 220 OHM, 0.063W	
R1378	EXB28V220J	RESISTOR ARRAY	
R1379	ERJ2GEJ331	M 330 OHM, 0.063W	
R1380	EXB28V220J	RESISTOR ARRAY	
R1381	EXB28V102J	RESISTOR ARRAY	
R1382	EXB28V220J	RESISTOR ARRAY	
R1383	EXB28V102J	RESISTOR ARRAY	
R1384	EXB28V220J	RESISTOR ARRAY	
R1385	EXB28V102J	RESISTOR ARRAY	
R1386	EXB28V220J	RESISTOR ARRAY	
R1388	EXB28V220J	RESISTOR ARRAY	
R1389	EXB28V220J	RESISTOR ARRAY	
R1390	ERJ2GEJ101	M 100 OHM, 0.063W	
R1391	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1392	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1393	EXB28V220J	RESISTOR ARRAY	
R1394	EXB28V220J	RESISTOR ARRAY	
R1395	EXB28V220J	RESISTOR ARRAY	
R1396	ERJ2GEJ220	M 22 OHM, 0.063W	
R1397	ERJ2GEJ220	M 22 OHM, 0.063W	
R1398	EXB28V220J	RESISTOR ARRAY	
R1399	EXB28V220J	RESISTOR ARRAY	
R1400	EXB28V220J	RESISTOR ARRAY	
R1401	EXB28V220J	RESISTOR ARRAY	
R1402	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1403	ERJ3GEY0R00	M 0 OHM, 1/16W	

R1404	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1405	ERJ2GEJ102	M 1K OHM, 0.063W	
R1406	ERJ2GEJ103	M 10K OHM, 0.063W	
R1407	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1408	ERJ3EKF1473	M 147KOHM, 0.063W	
R1409	ERJ3EKF1002	M 10KOHM, 1/16W	
R1410	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1411	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1412	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1416	ERJ2GEJ220	M 22 OHM, 0.063W	
R1417	ERJ2GEJ220	M 22 OHM, 0.063W	
R1418	ERJ2GEJ220	M 22 OHM, 0.063W	
R1419	ERJ2GEJ473	M 47K OHM, 0.063W	
R1420	ERJ2GEJ473	M 47K OHM, 0.063W	
R1421	ERJ2GEJ473	M 47K OHM, 0.063W	
R1422	ERJ2GEJ104	M 100KOHM, 0.063W	
R1423	ERJ2GEJ104	M 100KOHM, 0.063W	
R1424	ERJ2GEJ104	M 100KOHM, 0.063W	
R1425	ERJ2GEJ220	M 22 OHM, 0.063W	
R1426	ERJ2GEJ220	M 22 OHM, 0.063W	
R1427	ERJ3GEYJ561	M 560 OHM,J,1/16W	
R1429	ERJ3GEY0R00	M 0 OHM,J,1/16W	
R1430	ERJ1TYJ221	M 220 OHM, 1W	
R1431	ERJ1TYJ221	M 220 OHM, 1W	
R1432	ERJ2GEJ105	M 1M OHM, 0.063W	LB10VU/E
R1433	ERJ3GEY0R00	M 0 OHMJ,J1/16W	
R1434	ERJ3GEYJ272	M 2.7KOHMJ,J1/16W	
R1435	ERJ3GEYJ272	M 2.7KOHMJ,J1/16W	
R1436	ERJ3GEYJ272	M 2.7KOHMJ,J1/16W	
R1437	ERJ3GEYJ272	M 2.7KOHMJ,J1/16W	
R1438	ERJ3GEYJ272	M 2.7KOHMJ,J1/16W	
R1439	ERJ2GE0R00	M 0 OHM, 0.063W	LB10NTU/E, LB10U/E, LB10VU/E
R1440	ERJ2GE0R00	M 0 OHM, 0.063W	LB10SU/E
R1441	ERJ2GEJ104	M 100KOHM, 0.063W	
R1442	ERJ2GEJ104	M 100KOHM, 0.063W	
R1443	ERJ2GE0R00	M 0 OHM, 0.063W	LB10SU/E
R1444	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1445	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1446	ERJ3GEY0R00	M 0 OHM, 1/16W	

R1447	ERJ2GEJ220	M 22 OHM, 0.063W	
R1801	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1803	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1804	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1805	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1810	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	LB10NTU/E
R1812	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1814	ERJ3GEYJ560	M 560 OHM,1/16W	LB10NTU/E
R1815	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1818	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1819	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1820	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1821	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1823	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1824	ERJ3GEY0R00	M 0 OHM, 1/16W	LB10NTU/E
R1829	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1830	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1833	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1834	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1835	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1836	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1837	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1838	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1839	ERJ3GEYJ560	M 560 OHM,1/16W	LB10NTU/E
R1840	ERJ3GEY0R00	M 0 OHM, 1/16W	LB10NTU/E
R1844	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002 (LB10NTU/E)
R1846	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002 (LB10NTU/E)
R1854	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1860	ERJ3GEYJ105	M 1M OHM,J,1/16W	LB10NTU/E
R1861	ERJ3GEYJ100	M 100 OHM, 1/16W	LB10NTU/E
R1862	ERJ3GEY0R00	M 0 OHM, 1/16W	LB10NTU/E
R1863	ERJ3GEYJ105	M 1M OHM,J,1/16W	LB10NTU/E
R1870	ERJ3GEY0R00	M 0 OHM, 1/16W	LB10NTU/E
R1871	ERJ3GEY0R00	M 0 OHM, 1/16W	LB10NTU/E
R1872	ERJ3GEY0R00	M 0 OHM, 1/16W	LB10NTU/E
R1873	ERJ3GEY0R00	M 0 OHM, 1/16W	LB10NTU/E
R1875	ERJ3GEY0R00	M 0 OHM, 1/16W	LB10NTU/E
R1877	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R1878	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002 (LB10NTU/E)



R1879	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002 (LB10NTU/E)
R1894	ERJ3GEYJ103	M 10K OHM,J,1/16W	LB10NTU/E
R2001	ERJ3GEYJ100	M 10 OHM,J,1/16W	
R2002	ERJ6ENF5601	M 5.6KOHM, 1/10W	
R2003	ERJ6ENF2201	M 2.2KOHM, 1/10W	
R2004	ERJ6ENF6801	M 6.8KOHM, 1/10W	
R2005	ERJ6ENF3302	M 33KOHM, 1/10W	
R2006	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002
R2007	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002
R2008	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002
R2009	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002
R2010	ERJ3GEYJ101	M 100 OHM,J,1/16W	D0GB101JA002
R2011	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R2012	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R2013	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R2014	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R2015	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R2016	ERJ6GEYJ470	M 47 OHM,J,1/10W	
R2017	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R2019	ERJ3GEY0R00	M 0 OHM,J,1/16W	
R3001	ERJ3GEYJ100	M 10 OHM,J,1/16W	
R3002	ERJ6ENF5601	M 5.6KOHM, 1/10W	
R3003	ERJ6ENF3302	M 33KOHM, 1/10W	
R3004	ERJ6ENF1002	M 10KOHM, 1/10W	
R3005	ERJ3GEYJ100	M 10 OHM,J,1/16W	
R3006	ERJ6ENF1002	M 10KOHM, 1/10W	
R3007	ERJ6ENF2201	M 2.2KOHM, 1/10W	
R3008	ERJ6ENF1001	M 1KOHM, 1/10W	
R3009	ERJ6ENF2201	M 2.2KOHM, 1/10W	
R3010	ERJ6ENF1001	M 1KOHM, 1/10W	
R3011	ERJ6ENF2201	M 2.2KOHM, 1/10W	
R3012	ERJ6ENF1003	M 100KOHM, 1/10W	
R9101	ERDS1TJ474	C 4.7KOHM, J,1/2W	
R9102	D0A1825JA015	RESISTOR	
R9601	ERX2SJR47	M 0.47OHM,J, 2W	
R9630	ERJ14YJ3R3	M 3.3 OHM,J, 1/4W	
R9631	ERJ8GEYJ220	M 22 OHM,J, 1/8W	
R9632	ERJ14YJ5R6	M 5.6 OHM,J, 1/4W	

R9633	ERJ8GEYJ100	M 10 OHM,J, 1/8W	
R9634	ERJ8GEYJ120	M 12 OHM,J, 1/8W	
R9636	ERJ14YJ3R3	M 3.3 OHM,J, 1/4W	
R9637	ERJ8GEYJ220	M 22 OHM,J, 1/8W	
R9638	ERJ14YJ5R6	M 5.6 OHM,J, 1/4W	
R9639	ERJ8GEYJ100	M 10 OHM,J, 1/8W	
R9640	ERJ8GEYJ120	M 12 OHM,J, 1/8W	
R9653	D0XGR22KA001	RESISTOR	
[CAPACITORS]			
C1001	EEVHB0J221U	E 220UF, 6.3V	
C1002	ECJ0EB1C103K	C 0.01UF, 16V	
C1003	EEVHB0J221U	E 220UF, 6.3V	
C1004	ECJ0EB1C103K	C 0.01UF, 16V	
C1005	EEVHB0J221U	E 220UF, 6.3V	
C1006	ECJ0EB1C103K	C 0.01UF, 16V	
C1007	ECJ0EF1C104Z	C 0.1UF, 16V	
C1008	ECJ1XB1H472K	C 4700PF, K, 50V	
C1009	ECJ2XF1C105Z	C 1UF, Z, 16V	
C1010	EEVHB0J330	E 33UF, 6.3V	
C1011	ECJ0EF1C104Z	C 0.1UF, 16V	
C1012	EEVHB0J330	E 33UF, 6.3V	
C1013	EEVHB1A101	E 100UF, 10V	
C1014	ECJ0EF1C104Z	C 0.1UF, 16V	
C1015	ECJ0EF1C104Z	C 0.1UF, 16V	
C1016	ECJ0EB1C103K	C 0.01UF, 16V	
C1017	ECJ0EF1C104Z	C 0.1UF, 16V	
C1018	ECJ0EB1C103K	C 0.01UF, 16V	
C1019	ECJ1XC1H102J	C 1000PF, J, 50V	
C1020	ECUX1H120JCV	C 12PF, 50V	
C1021	ECJ0EF1C104Z	C 0.1UF, 16V	
C1022	ECJ0EB1C103K	C 0.01UF, 16V	
C1023	ECJ0EB1C103K	C 0.01UF, 16V	
C1024	EEVHB1C470	E 47UF, 16V	
C1025	ECUX1H270JCV	C 27PF, 50V	
C1026	ECUX1H120JCV	C 12PF, 50V	
C1027	ECJ1XF1A105Z	C 100UF, 10V	
C1028	ECUX1H270JCV	C 27PF, 50V	

C1029	ECJ0EF1C104Z	C 0.1UF, 16V	
C1032	ECJ0EF1C104Z	C 0.1UF, 16V	
C1033	ECJ1XF1A105Z	C 100UF, 10V	
C1034	EEVHB0J470	E 47UF, 6.3V	
C1035	ECJ1XF1A105Z	C 100UF, 10V	
C1036	ECJ0EB1C103K	C 0.01UF, 16V	
C1037	ECJ0EB1C103K	C 0.01UF, 16V	
C1038	ECJ0EB1C103K	C 0.01UF, 16V	
C1039	ECJ1XF1A105Z	C 100UF, 10V	
C1040	ECJ1XF1A105Z	C 100UF, 10V	
C1041	ECJ1XF1A105Z	C 100UF, 10V	
C1042	ECJ1XF1A105Z	C 100UF, 10V	
C1043	ECJ1XF1A105Z	C 100UF, 10V	
C1044	ECJ1XF1A105Z	C 100UF, 10V	
C1047	ECJ2XF1C225Z	C 2.2UF, Z, 16V	
C1049	ECJ2XF1C225Z	C 2.2UF, Z, 16V	
C1050	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1051	ECJ1XF1A105Z	C 100UF, 10V	
C1052	ECJ1XF1A105Z	C 100UF, 10V	
C1053	ECJ1XF1A105Z	C 100UF, 10V	
C1054	ECJ0EF1C104Z	C 0.1UF, 16V	
C1058	EEVHB0J470	E 47UF, 6.3V	
C1061	ECJ0EF1C104Z	C 0.1UF, 16V	
C1062	EEVHB0J330	E 33UF, 6.3V	
C1072	EEVHB1C470	E 47UF, 16V	
C1075	EEVHB1C100	E 10UF, 16V	
C1076	ECJ3XB0J106M	C 10UF, 6.3V	
C1077	ECJ0EF1C104Z	C 0.1UF, 16V	
C1078	ECJ0EF1C104Z	C 0.1UF, 16V	
C1079	ECJ0EB1C103K	C 0.01UF, 16V	
C1080	ECJ3XB0J106M	C 10UF, 6.3V	
C1081	EEVHB1C100	E 10UF, 16V	
C1082	ECJ0EF1C104Z	C 0.1UF, 16V	
C1083	ECJ0EF1C104Z	C 0.1UF, 16V	
C1084	ECJ2XF1C225Z	C 2.2UF, Z, 16V	
C1085	ECJ0EF1C104Z	C 0.1UF, 16V	
C1086	ECJ0EB1C103K	C 0.01UF, 16V	
C1087	ECJ0EF1C104Z	C 0.1UF, 16V	
C1088	ECJ0EF1C104Z	C 0.1UF, 16V	

C1089	ECJ0EF1C104Z	C 0.1UF, 16V	
C1090	ECJ0EF1C104Z	C 0.1UF, 16V	
C1091	ECJ0EF1C104Z	C 0.1UF, 16V	
C1092	ECJ0EF1C104Z	C 0.1UF, 16V	
C1093	ECJ1XC1H102J	C 1000PF, J, 50V	
C1094	EEVHB0G101	E 100UF, 4V	
C1095	ECJ0EF1C104Z	C 0.1UF, 16V	
C1096	ECJ0EF1C104Z	C 0.1UF, 16V	
C1097	ECJ0EF1C104Z	C 0.1UF, 16V	
C1098	ECJ0EF1C104Z	C 0.1UF, 16V	
C1099	ECJ0EF1C104Z	C 0.1UF, 16V	
C1100	ECJ1XC1H151J	C 150PF, 50V	
C1101	EEVHB1C100	E 10UF, 16V	
C1102	ECJ0EF1C104Z	C 0.1UF, 16V	
C1103	EEVHB0J101	E 100UF, 6.3V	EEVHB0J101P
C1104	EEVHB1C470	E 47UF, 16V	
C1107	ECJ0EF1C104Z	C 0.1UF, 16V	
C1108	ECJ0EF1C104Z	C 0.1UF, 16V	
C1109	ECUV1C823KBV	C 0.082PF, 16V	ECJ1VB1C823K
C1110	ECUX1H822KBV	C 8200PF, 50V	ECJ1XB1H822K
C1111	ECJ2XF1C105Z	C 1UF, Z, 16V	
C1113	ECJ0EB1C103K	C 0.01UF, 16V	
C1114	ECJ0EF1C104Z	C 0.1UF, 16V	
C1116	ECJ1XB1H472K	C 4700PF, K, 50V	
C1117	ECJ0EB1C103K	C 0.01UF, 16V	
C1118	ECJ3XF1C475Z	C 4.7UF, Z, 16V	
C1119	ECJ3XF1C475Z	C 4.7UF, Z, 16V	
C1120	ECJ3XF1C475Z	C 4.7UF, Z, 16V	
C1121	ECJ0EF1C104Z	C 0.1UF, 16V	
C1122	ECJ1XC1H150J	C 150PF, 50V	
C1123	ECJ0EF1C104Z	C 0.1UF, 16V	
C1124	ECJ1XC1H221J	C 220PF, 50V	
C1125	ECJ0EF1C104Z	C 0.1UF, 16V	
C1126	ECJ1XC1H150J	C 150PF, 50V	
C1127	ECJ0EF1C104Z	C 0.1UF, 16V	
C1128	EEFUD0J101R	CAPACITOR	
C1129	ECJ2XC1H391J	C 390PF, J, 50V	
C1130	EEVHB1C100	E 10UF, 16V	
C1131	ECJ0EF1C104Z	C 0.1UF, 16V	

C1132	ECJ0EF1C104Z	C 0.1UF, 16V	
C1133	ECJ0EF1C104Z	C 0.1UF, 16V	
C1134	ECJ1XC1H181J	C 180PF, J, 50V	
C1135	ECJ0EF1C104Z	C 0.1UF, 16V	
C1136	ECJ1XF1A105Z	C 100UF, 10V	
C1137	EEVHB0G101	E 100UF, 4V	
C1138	ECJ0EF1C104Z	C 0.1UF, 16V	
C1139	ECJ0EF1C104Z	C 0.1UF, 16V	
C1140	ECJ0EF1C104Z	C 0.1UF, 16V	
C1141	ECJ2XF1C225Z	C 2.2UF, Z, 16V	
C1142	EEVHB0J101	E 100UF, 6.3V	EEVHB0J101P
C1143	EEVHB1C470	E 47UF, 16V	
C1145	ECJ0EF1C104Z	C 0.1UF, 16V	
C1146	EEVHB1C470	E 47UF, 16V	
C1147	ECJ3XF1C475Z	C 4.7UF, Z, 16V	
C1149	ECJ0EF1C104Z	C 0.1UF, 16V	
C1150	ECJ0EF1C104Z	C 0.1UF, 16V	
C1152	ECJ0EF1C104Z	C 0.1UF, 16V	
C1154	ECJ0EF1C104Z	C 0.1UF, 16V	
C1155	ECJ1XF1C104Z	C 0.1UF, Z, 16V	
C1156	ECJ1XF1A105Z	C 100UF, 10V	
C1157	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1158	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1159	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1160	EEVHB0J470	E 47UF, 6.3V	LB10NTU/E
C1161	ECJ2XF1C105Z	C 1UF, Z, 16V	
C1162	ECJ0EF1C104Z	C 0.1UF, 16V	
C1163	ECJ0EF1C104Z	C 0.1UF, 16V	
C1164	ECJ0EF1C104Z	C 0.1UF, 16V	
C1165	ECJ0EF1C104Z	C 0.1UF, 16V	
C1166	ECJ0EF1C104Z	C 0.1UF, 16V	
C1167	ECJ0EF1C104Z	C 0.1UF, 16V	
C1168	ECJ0EF1C104Z	C 0.1UF, 16V	
C1169	ECJ0EF1C104Z	C 0.1UF, 16V	
C1170	ECJ0EF1C104Z	C 0.1UF, 16V	
C1171	ECJ0EF1C104Z	C 0.1UF, 16V	
C1172	ECJ0EF1C104Z	C 0.1UF, 16V	
C1173	ECJ0EF1C104Z	C 0.1UF, 16V	
C1174	ECJ0EF1C104Z	C 0.1UF, 16V	

C1175	ECJ0EF1C104Z	C 0.1UF, 16V	
C1176	ECJ0EF1C104Z	C 0.1UF, 16V	
C1177	ECJ0EF1C104Z	C 0.1UF, 16V	
C1178	ECJ0EF1C104Z	C 0.1UF, 16V	
C1179	ECJ0EF1C104Z	C 0.1UF, 16V	
C1180	ECJ0EF1C104Z	C 0.1UF, 16V	
C1181	ECJ0EF1C104Z	C 0.1UF, 16V	
C1182	ECJ0EF1C104Z	C 0.1UF, 16V	
C1183	ECJ0EF1C104Z	C 0.1UF, 16V	
C1184	ECJ0EF1C104Z	C 0.1UF, 16V	
C1185	ECJ0EF1C104Z	C 0.1UF, 16V	
C1186	ECJ0EF1C104Z	C 0.1UF, 16V	
C1187	EEVHB0J470	E 47UF, 6.3V	
C1188	ECJ0EF1C104Z	C 0.1UF, 16V	
C1189	ECJ0EF1C104Z	C 0.1UF, 16V	
C1190	ECJ0EF1C104Z	C 0.1UF, 16V	
C1191	ECJ0EF1C104Z	C 0.1UF, 16V	
C1192	ECJ0EF1C104Z	C 0.1UF, 16V	
C1193	ECJ0EF1C104Z	C 0.1UF, 16V	
C1194	ECJ0EF1C104Z	C 0.1UF, 16V	
C1195	ECJ0EF1C104Z	C 0.1UF, 16V	
C1196	ECJ0EF1C104Z	C 0.1UF, 16V	
C1197	ECJ0EF1C104Z	C 0.1UF, 16V	
C1198	ECJ0EF1C104Z	C 0.1UF, 16V	
C1199	EEVHB0J470	E 47UF, 6.3V	
C1200	ECJ1XF1A105Z	C 100UF, 10V	
C1201	ECJ1XF1A105Z	C 100UF, 10V	
C1202	ECJ0EF1C104Z	C 0.1UF, 16V	
C1203	ECJ0EF1C104Z	C 0.1UF, 16V	
C1204	ECJ0EF1C104Z	C 0.1UF, 16V	
C1206	ECJ0EF1C104Z	C 0.1UF, 16V	
C1207	ECJ0EF1C104Z	C 0.1UF, 16V	
C1208	ECJ0EF1C104Z	C 0.1UF, 16V	
C1209	ECJ0EF1C104Z	C 0.1UF, 16V	
C1210	ECJ1XF1H333Z	C 0.033UF, 50V	
C1212	ECJ0EF1C104Z	C 0.1UF, 16V	
C1213	ECJ0EF1C104Z	C 0.1UF, 16V	
C1214	ECJ0EF1C104Z	C 0.1UF, 16V	
C1215	ECJ0EF1C104Z	C 0.1UF, 16V	




C1216	ECJ0EF1C104Z	C 0.1UF, 16V	
C1217	ECJ1XC1H471J	C 470PF, J, 50V	
C1218	ECJ0EF1C104Z	C 0.1UF, 16V	
C1219	ECJ1XC1H100C	C 10PF, 50V	
C1220	ECJ0EF1C104Z	C 0.1UF, 16V	
C1221	ECJ1XC1H100C	C 10PF, 50V	
C1222	ECJ0EF1C104Z	C 0.1UF, 16V	
C1223	ECJ0EF1C104Z	C 0.1UF, 16V	
C1224	EEVHB0J470	E 47UF, 6.3V	
C1225	ECJ0EF1C104Z	C 0.1UF, 16V	
C1228	EEVHB0J330	E 33UF, 6.3V	
C1229	ECJ0EF1C104Z	C 0.1UF, 16V	
C1230	EEVHB0G101	E 100UF, 4V	
C1232	ECJ0EF1C104Z	C 0.1UF, 16V	
C1233	ECJ0EF1C104Z	C 0.1UF, 16V	
C1234	ECJ0EF1C104Z	C 0.1UF, 16V	
C1235	ECJ0EF1C104Z	C 0.1UF, 16V	
C1236	ECJ0EF1C104Z	C 0.1UF, 16V	
C1237	ECJ0EF1C104Z	C 0.1UF, 16V	
C1238	ECJ0EF1C104Z	C 0.1UF, 16V	
C1239	ECJ0EF1C104Z	C 0.1UF, 16V	
C1240	ECJ0EF1C104Z	C 0.1UF, 16V	
C1241	ECJ0EF1C104Z	C 0.1UF, 16V	
C1242	ECJ0EF1C104Z	C 0.1UF, 16V	
C1243	ECJ0EF1C104Z	C 0.1UF, 16V	
C1244	ECJ0EF1C104Z	C 0.1UF, 16V	
C1245	ECJ0EF1C104Z	C 0.1UF, 16V	
C1246	ECJ0EF1C104Z	C 0.1UF, 16V	
C1247	ECJ0EF1C104Z	C 0.1UF, 16V	
C1248	ECJ0EF1C104Z	C 0.1UF, 16V	
C1249	ECJ0EF1C104Z	C 0.1UF, 16V	
C1250	ECJ0EF1C104Z	C 0.1UF, 16V	
C1251	ECJ0EF1C104Z	C 0.1UF, 16V	
C1252	ECJ0EF1C104Z	C 0.1UF, 16V	
C1253	ECJ0EF1C104Z	C 0.1UF, 16V	
C1254	ECJ0EF1C104Z	C 0.1UF, 16V	
C1255	ECJ0EF1C104Z	C 0.1UF, 16V	
C1256	ECJ0EF1C104Z	C 0.1UF, 16V	
C1257	ECJ0EF1C104Z	C 0.1UF, 16V	




C1258	ECJ0EF1C104Z	C 0.1UF, 16V	
C1259	ECJ0EF1C104Z	C 0.1UF, 16V	
C1260	ECJ0EF1C104Z	C 0.1UF, 16V	
C1261	ECJ0EF1C104Z	C 0.1UF, 16V	
C1262	ECJ0EF1C104Z	C 0.1UF, 16V	
C1263	ECJ0EF1C104Z	C 0.1UF, 16V	
C1264	ECJ0EF1C104Z	C 0.1UF, 16V	
C1265	ECJ0EF1C104Z	C 0.1UF, 16V	
C1266	ECJ0EF1C104Z	C 0.1UF, 16V	
C1267	EEVHB1E4R7	E 4.7UF, 25V	
C1268	EEVHB1E4R7	E 4.7UF, 25V	
C1269	EEVHB1A221	E 220UF, 10V	
C1270	EEVHB0J101	E 100UF, 6.3V	EEVHB0J101P
C1271	EEVHB0J101	E 100UF, 6.3V	EEVHB0J101P
C1272	EEVHB0J470	E 47UF, 6.3V	
C1273	ECJ0EF1C104Z	C 0.1UF, 16V	
C1274	ECJ0EF1C104Z	C 0.1UF, 16V	
C1275	ECJ0EF1C104Z	C 0.1UF, 16V	
C1276	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1277	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1278	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1279	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1280	EEVHB1E330	E 33UF, 25V	
C1281	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1282	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1283	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1284	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1285	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1286	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1287	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1288	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1289	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1290	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1291	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1292	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1293	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1294	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1295	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1296	ECJ1XF1E104Z	C 0.1UF, Z, 25V	



C1297	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1298	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1299	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1300	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1301	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1304	EEVHB1E330	E 33UF, 25V	
C1306	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1307	ECJ0EF1C104Z	C 0.1UF, 16V	
C1308	ECJ0EF1C104Z	C 0.1UF, 16V	
C1309	ECJ0EF1C104Z	C 0.1UF, 16V	
C1310	ECJ0EF1C104Z	C 0.1UF, 16V	
C1311	ECJ0EF1C104Z	C 0.1UF, 16V	
C1312	ECJ0EF1C104Z	C 0.1UF, 16V	
C1313	ECJ0EF1C104Z	C 0.1UF, 16V	
C1314	ECJ0EF1C104Z	C 0.1UF, 16V	
C1315	ECJ0EF1C104Z	C 0.1UF, 16V	
C1316	ECJ0EF1C104Z	C 0.1UF, 16V	
C1317	ECJ0EF1C104Z	C 0.1UF, 16V	
C1318	ECJ0EF1C104Z	C 0.1UF, 16V	
C1319	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1320	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1321	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1322	EEVHB1E4R7	E 4.7UF, 25V	
C1323	ECJ0EF1C104Z	C 0.1UF, 16V	
C1324	ECJ0EF1C104Z	C 0.1UF, 16V	
C1325	ECJ0EF1C104Z	C 0.1UF, 16V	
C1326	ECJ0EF1C104Z	C 0.1UF, 16V	
C1327	ECJ0EF1C104Z	C 0.1UF, 16V	
C1328	ECJ0EF1C104Z	C 0.1UF, 16V	
C1329	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1330	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1331	ECJ1XF1E104Z	C 0.1UF, Z, 25V	
C1332	F2G1E3300022	CAPACITOR	
C1333	EEVHB1E330	E 33UF, 25V	
C1334	EEVHB1E330	E 33UF, 25V	
C1335	EEVHB1A330	E 33UF, 10V	
C1336	F2G1A3300022	CAPACITOR	
C1337	EEVHB1A330	E 33UF, 10V	
C1341	ECJ2XF1C105Z	C 1UF, Z, 16V	

C1342	ECJ2XF1C105Z	C 1UF, Z, 16V	
C1343	ECJ2XF1C105Z	C 1UF, Z, 16V	
C1344	ECJ0EF1C104Z	C 0.1UF, 16V	LB10NTU/E
C1345	ECJ0EF1C104Z	C 0.1UF, 16V	
C1346	ECJ0EF1C104Z	C 0.1UF, 16V	
C1347	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1351	ECJ1XF1C104Z	C 0.1UF, Z, 16V (WL-PCB)	LB10NTU/E
C1353	F4D272750002	CAPACITOR	
C1354	ECJ1XF1C104Z	C 0.1UF, Z, 16V (WL-PCB)	LB10NTU/E
C1354	F4D272750002	CAPACITOR	
C1355	F4D272750002	CAPACITOR	
C1356	ECJ1XF1C104Z	C 0.1UF, Z, 16V (WL-PCB)	LB10NTU/E
C1356	F4D272750002	CAPACITOR	
C1357	F4D272750002	CAPACITOR	
C1360	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1539	EEVHB1E330	E 33UF, 25V	
C1801	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1805	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1806	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1807	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1808	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1813	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1814	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1815	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1816	F2G0J4700024	CAPACITOR	LB10NTU/E
C1817	F2G0J4700024	CAPACITOR	LB10NTU/E
C1818	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1819	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1820	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1824	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1825	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1830	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C1837	F2G0J4700024	CAPACITOR	LB10NTU/E
C1843	ECJ1XF1C104Z	C 0.1UF, Z, 16V	LB10NTU/E
C2001	EEVHB0J470	E 47UF, 6.3V	
C2002	ECJ1XF1C104Z	C 0.1UF, Z, 16V	
C2003	ECJ0EF1C104Z	C 0.1UF, 16V	

C2004	EEVHB0J470	E 47UF, 6.3V	
C3001	EEVHB0J330	E 33UF, 6.3V	
C3002	ECJ1XF1C104Z	C 0.1UF, Z, 16V	
C3003	ECJ1XF1C104Z	C 0.1UF, Z, 16V	
C9101	ECQU2A334MLA	CAPACITOR	
C9102	F1BAH1020016	CAPACITOR	
C9103	F1BAH1020016	CAPACITOR	
C9603	F0CZZ4740002	CAPACITOR	
C9610	F0C2E1050002	CAPACITOR	
C9617	F0C3C4720003	CAPACITOR	
C9618	F0C2J1540004	CAPACITOR	
C9619	F0C2J1540004	CAPACITOR	
[OTHERS]			
A1	K1MN30B00115	30P CONNECTOR	
A2	K1MN30B00114	30P CONNECTOR	
A3	K1MN30B00115	30P CONNECTOR	
A4	K1KA05B00153	5P CONNECTOR	
A6	K1KA12B00079	12P CONNECTOR	
A8	TJSF21710	10P CONNECTOR	K1MN10B00060
A9	K1KB05A00027	5P CONNECTOR	
A10	K1KA02B00051	2P CONNECTOR	
A13	K1KB21A00007	21P CONNECTOR	LB10NTU/E
A14	K1KB21A00007	21P CONNECTOR	LB10NTU/E
A15	TJS6A8780	3P CONNECTOR	K1KA03B00006
A16	K1KA03B00098	3P CONNECTOR	
A17	TJS6A8780	3P CONNECTOR	K1KA03B00006
A18	K1KA03B00098	3P CONNECTOR	
A19	K1KA04B00007	4P CONNECTOR	
S1	K1MN10B00116	10P CONNECTOR	
S2	K1KA05B00150	5P CONNECTOR	
WL4	K1KA21A00006	21P CONNECTOR	LB10NTU/E
WL5	K1KA21A00006	21P CONNECTOR	LB10NTU/E
CF2001	D4CC1103A037	THERMISTOR	
DL1001	J0HABC000011	FILTER	
DL1002	J0HABC000011	FILTER	
DL1003	J0HABC000011	FILTER	

F9101-1	EYF52BCY	FUSE HOLDER	
F9101-2	EYF52BCY	FUSE HOLDER	
JK1001	K1CB205B0003	S-VIDEO/VIDEO IN TERMINAL	
JK1002	K2EZ8B000002	RS232C I/F TERMINAL	
JK1004	K1FB115B0098	RGB IN TERMINAL	
JK1005	K1FB115B0079	RGB OUT TERMINAL	
JK1009	K2HA202B0025	AUDIO IN TERMINAL	
JK1802	K1NA50E00027	PC CARD CONNECTOR	LB10NTU/E
JK9101	K2AH3B000020	AC INLET	
RM2001	B3RAD0000058	REMOTE CONTROL RECEIVER	
S9602	A9BZ00000010	SPARK GAP	
SW2001	EVQPLHA15	SWITCH	
SW2002	EVQPLHA15	SWITCH	
SW2003	EVQPLHA15	SWITCH	
SW3001	EVQPLHA15	SWITCH	
SW3002	EVQWHA50K	SWITCH	
SW9601	T115AR3U3	SWITCH	
T9604	G4F2A0000001	TRANS	
X1002	H0J270500045	CRYSTAL	
X1003	H0J983400016	CRYSTAL	
X1006	H1A6505B0006	CRYSTAL	LB10NTU/E, LB10U/E, LB10VU/E
	H1A4405B0009	CRYSTAL	LB10SU/E
X1801	H1A6005B0011	CRYSTAL	LB10NTU/E
ZA9101	TJC6137	EARTH LUG	
RTL	TXANP03VJW5	CIRCUIT BOARD K	
RTL	TNPA3143	CIRCUIT BOARD WL	LB10NTU/E
RTL	TXANP01PVMZ	CIRCUIT BOARD A	LB10NTU/E
	TXANP01PVNZ	CIRCUIT BOARD A	LB10U/E
	TXANP01PVPZ	CIRCUIT BOARD A	LB10VU/E
	TXANP01PXAZ	CIRCUIT BOARD A	LB10SU/E
RTL	TNPA3145	CIRCUIT BOARD S2	
RTL	TNPA3144	CIRCUIT BOARD S1	
	TXANP02VJW5	POWER UNIT ASSY	
	TXANP05VJW5	BALLAST UNIT ASSY	

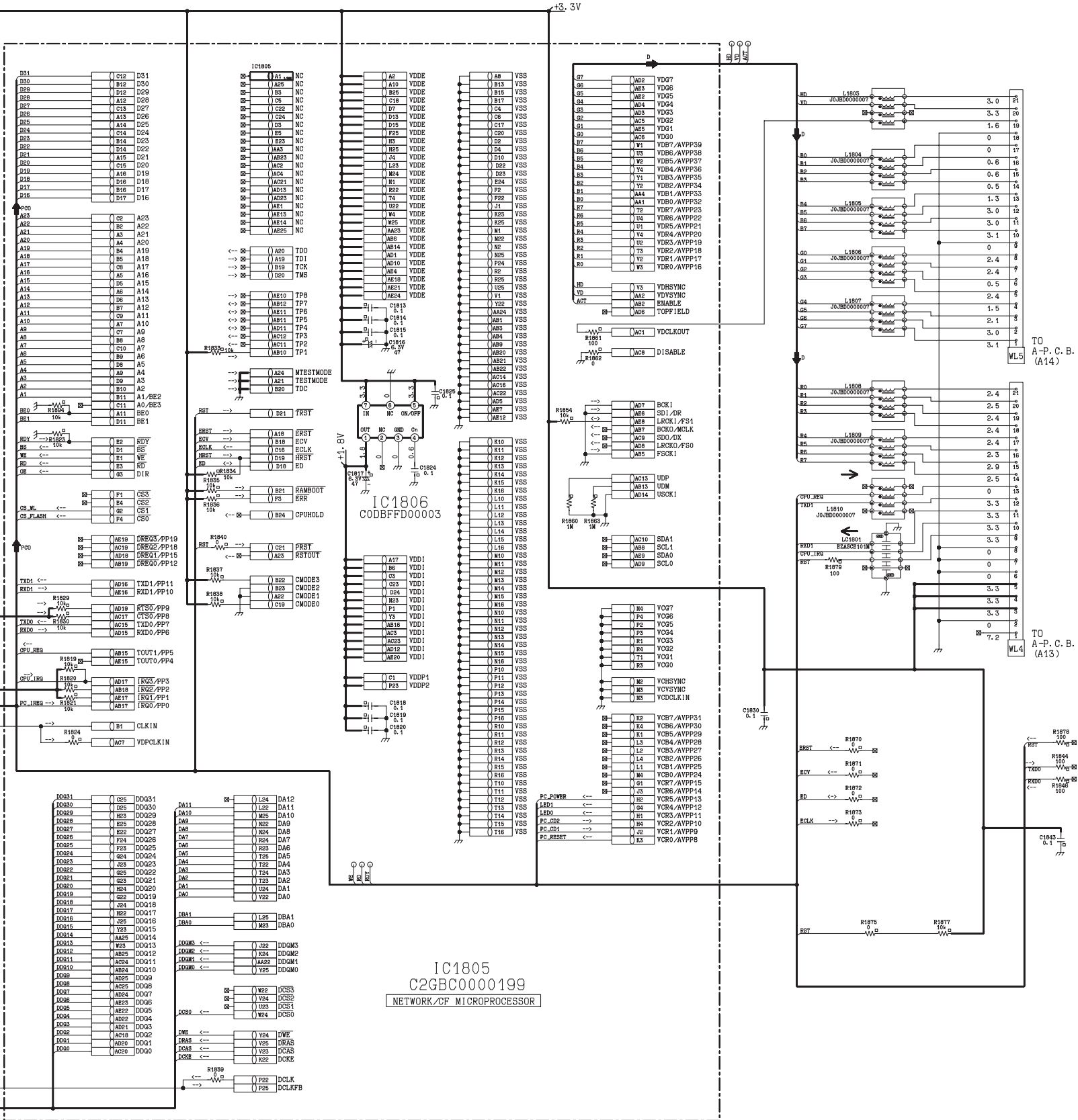
[TOP](#) [PREVIOUS](#) [NEXT](#)

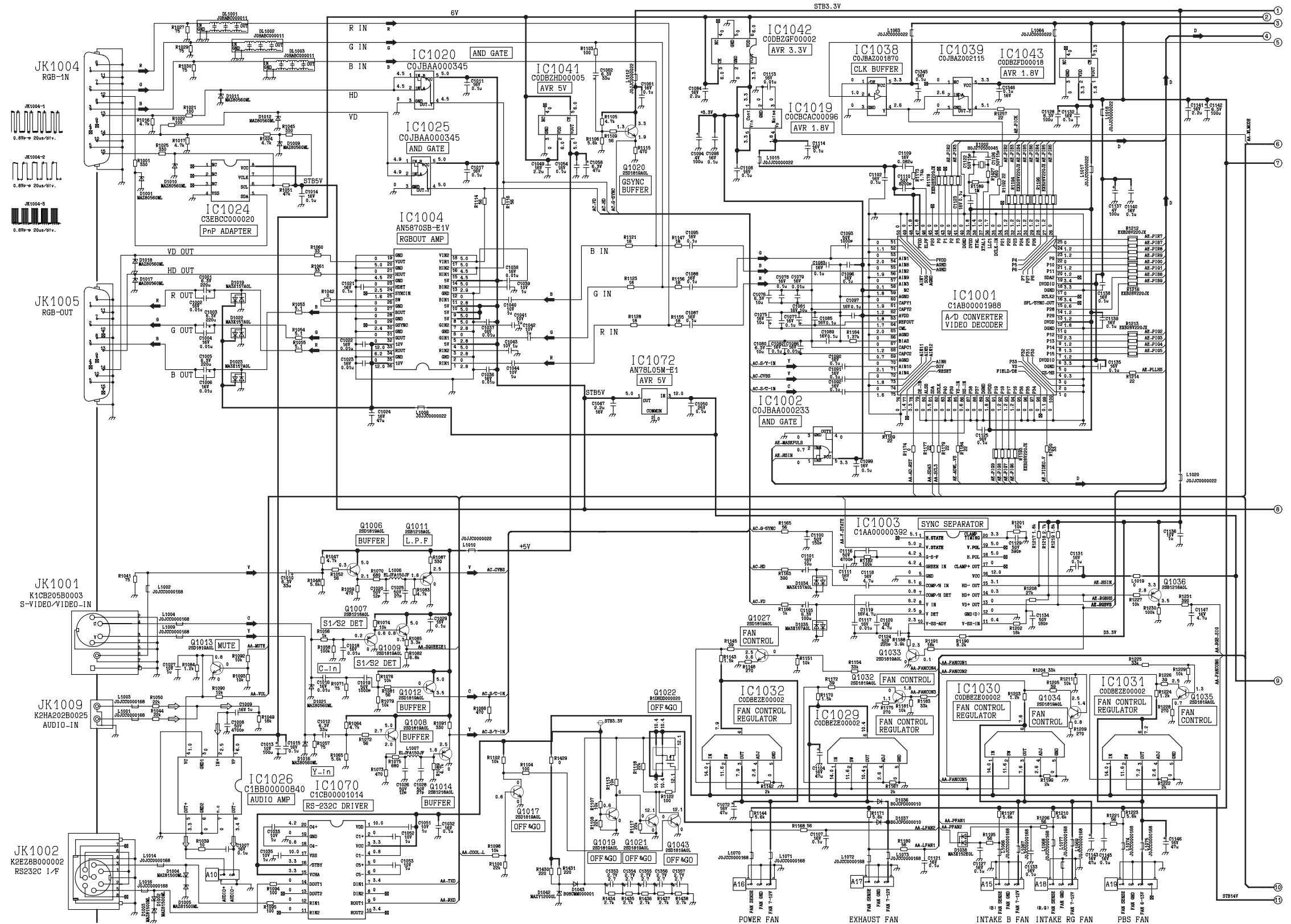
# 17 Schematic Diagram for printing with A4 size

[TOP PREVIOUS](#)

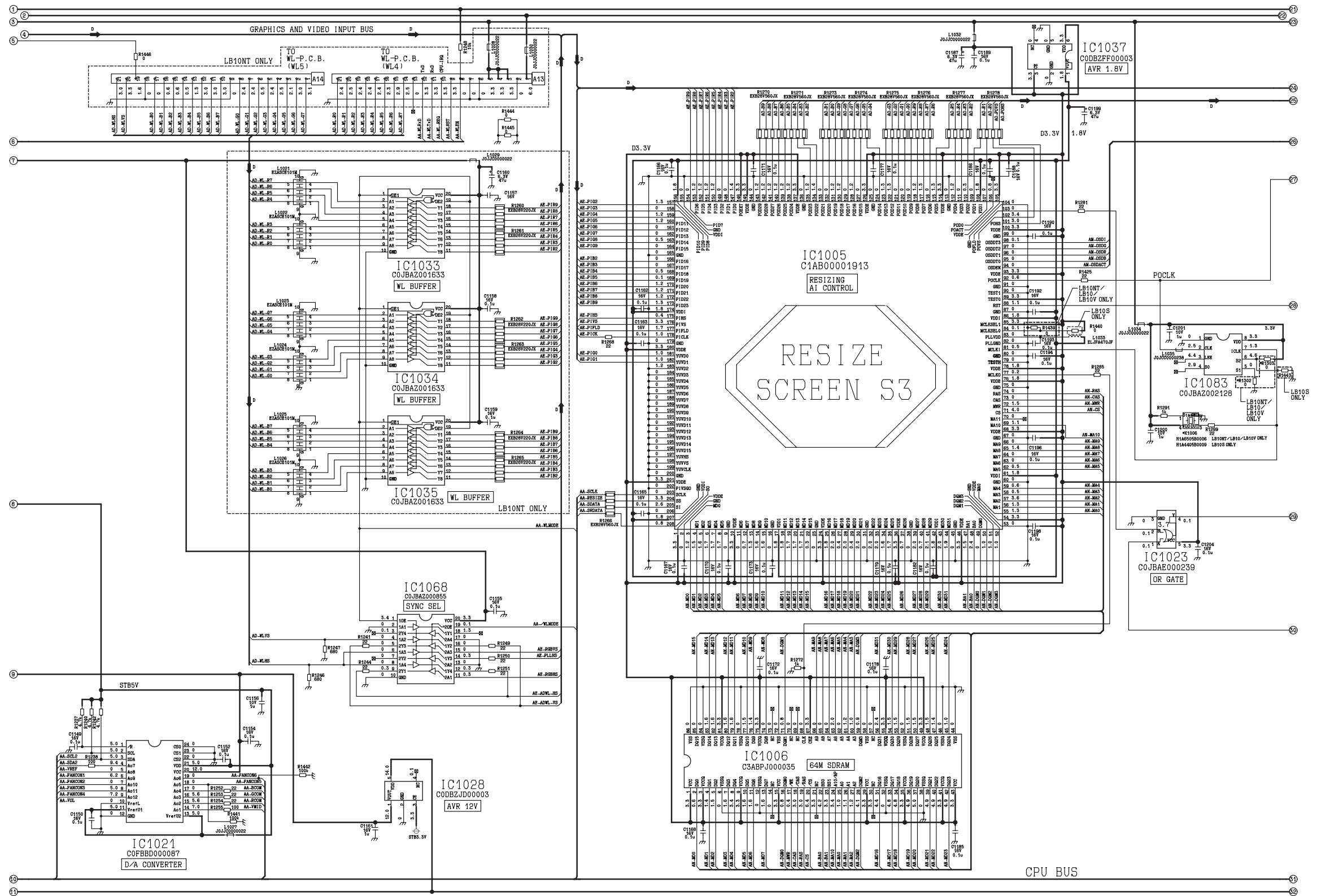


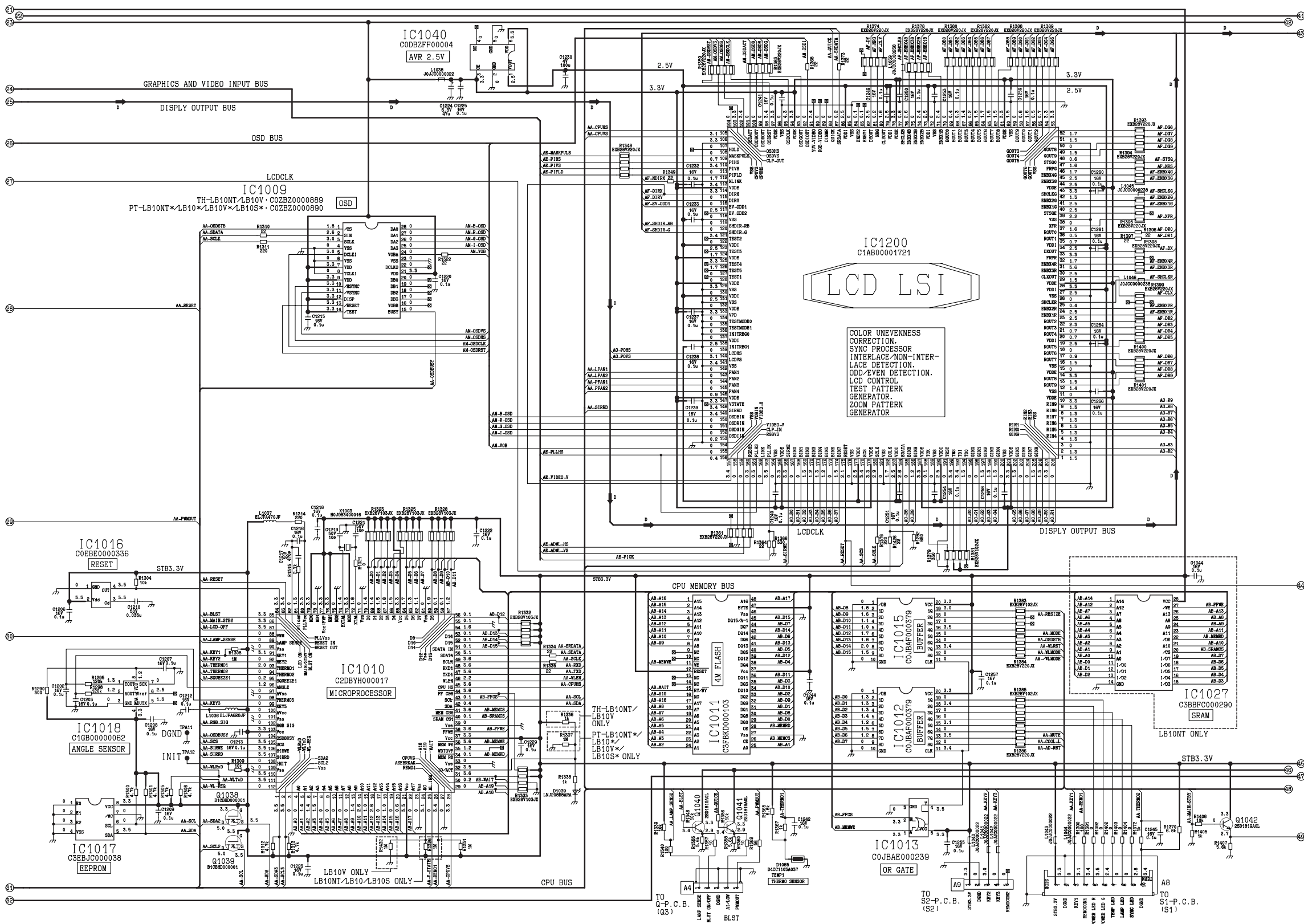
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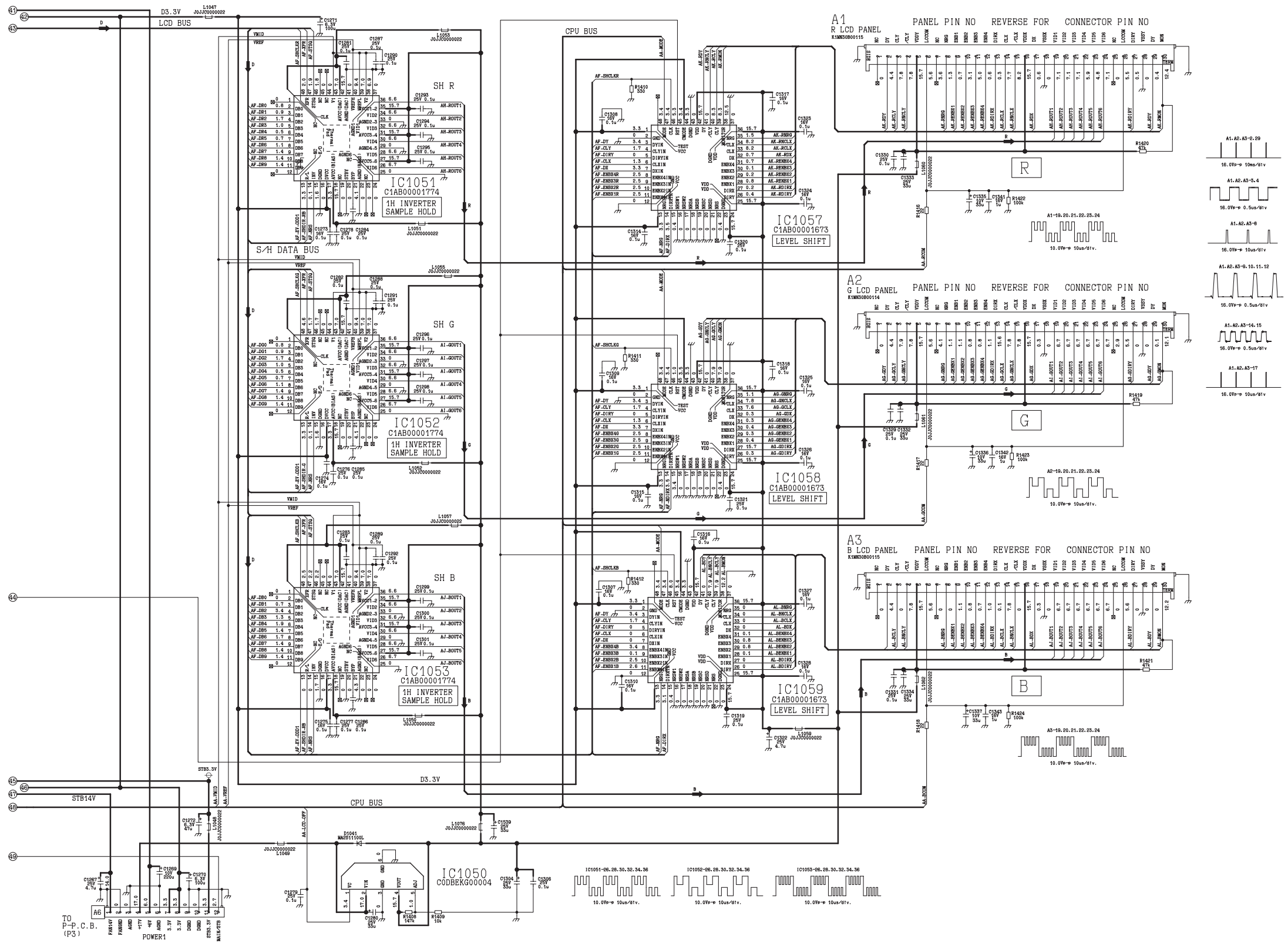










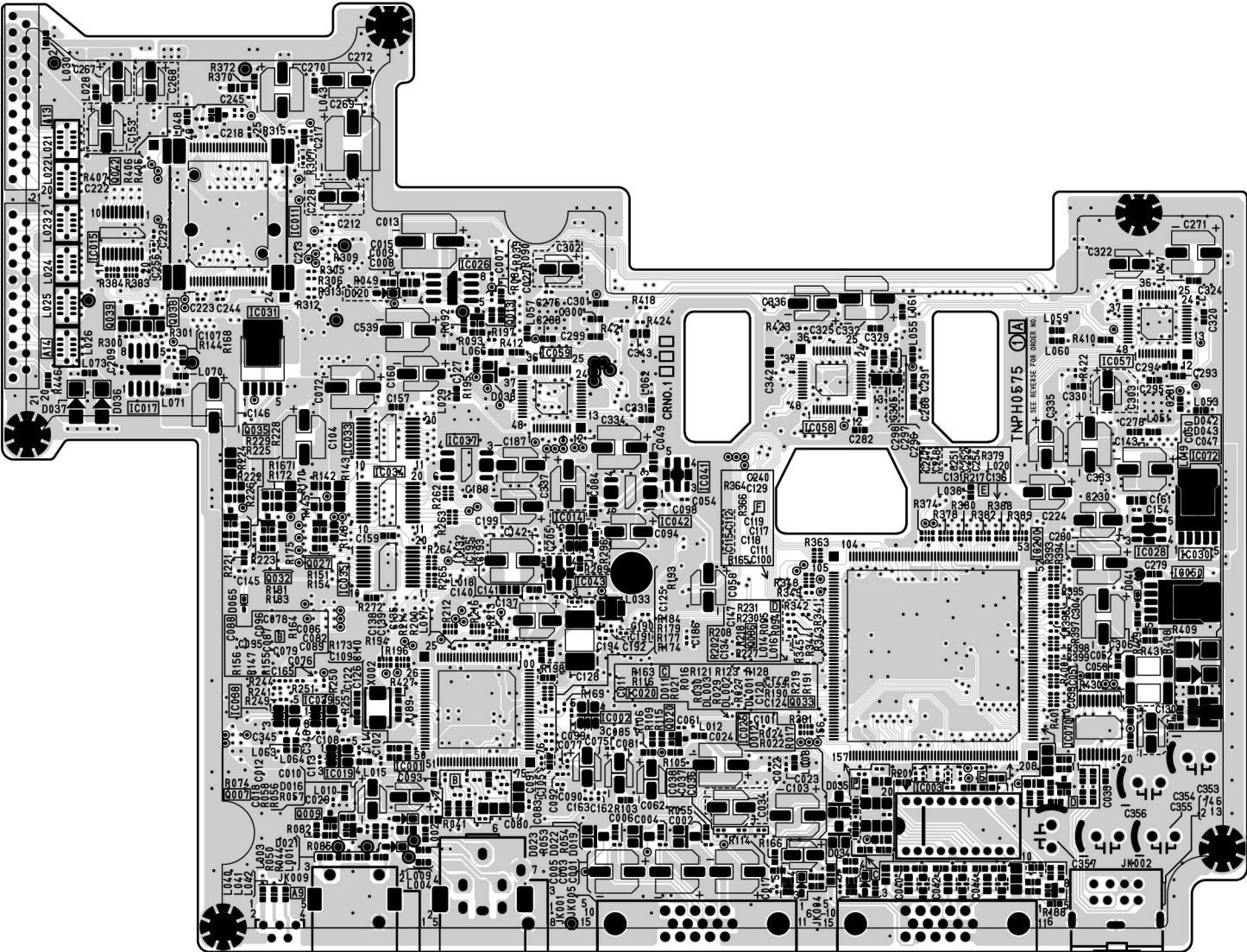


A-P.C.Board  
(Component Side)

TXANP01PVMZ (LB10NT\*)  
TXANP01PVNZ (LB10\*)  
TXANP01PVPZ (LB10V\*)  
TXANP01P000 (LB10S\*)

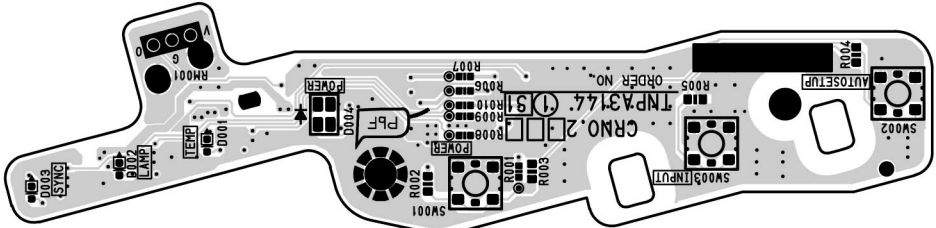
A-P.C.Board(Component Side)					
IC			TRANSISTOR		
IC1001	A-2	IC1034	B-2	Q1007	A-2
IC1002	B-3	IC1035	B-2	Q1009	A-2
IC1003	A-4	IC1037	C-2	Q1013	C-3
IC1011	C-2	IC1038	B-2	Q1020	B-3
IC1014	B-3	IC1039	B-2	Q1027	B-2
IC1015	C-1	IC1041	B-3	Q1032	B-2
IC1017	C-1	IC1042	B-3	Q1033	B-4
IC1019	A-2	IC1043	B-3	Q1035	C-2
IC1020	B-3	IC1050	B-5	Q1036	B-4
IC1025	B-3	IC1057	C-5	Q1038	C-1
IC1026	C-2	IC1058	C-4	Q1039	C-1
IC1028	B-5	IC1059	C-3	Q1042	D-1
IC1030	B-5	IC1070	A-5		
IC1031	C-2	IC1072	B-5		
IC1033	C-2	IC1200	B-4		

ADDRESS INFORMATION



S1-P.C.Board  
(File Side)

TNPA3144

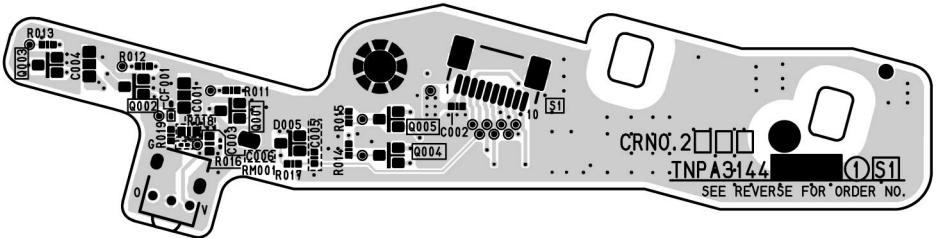


S1-P.C.Board  
(Component Side)

TNPA3144

S1-P.C.Board(Component Side)			
TRANSISTOR			
Q2001	B-7	Q2004	B-7
Q2002	B-6	Q2005	B-7
Q2003	B-6		

ADDRESS INFORMATION



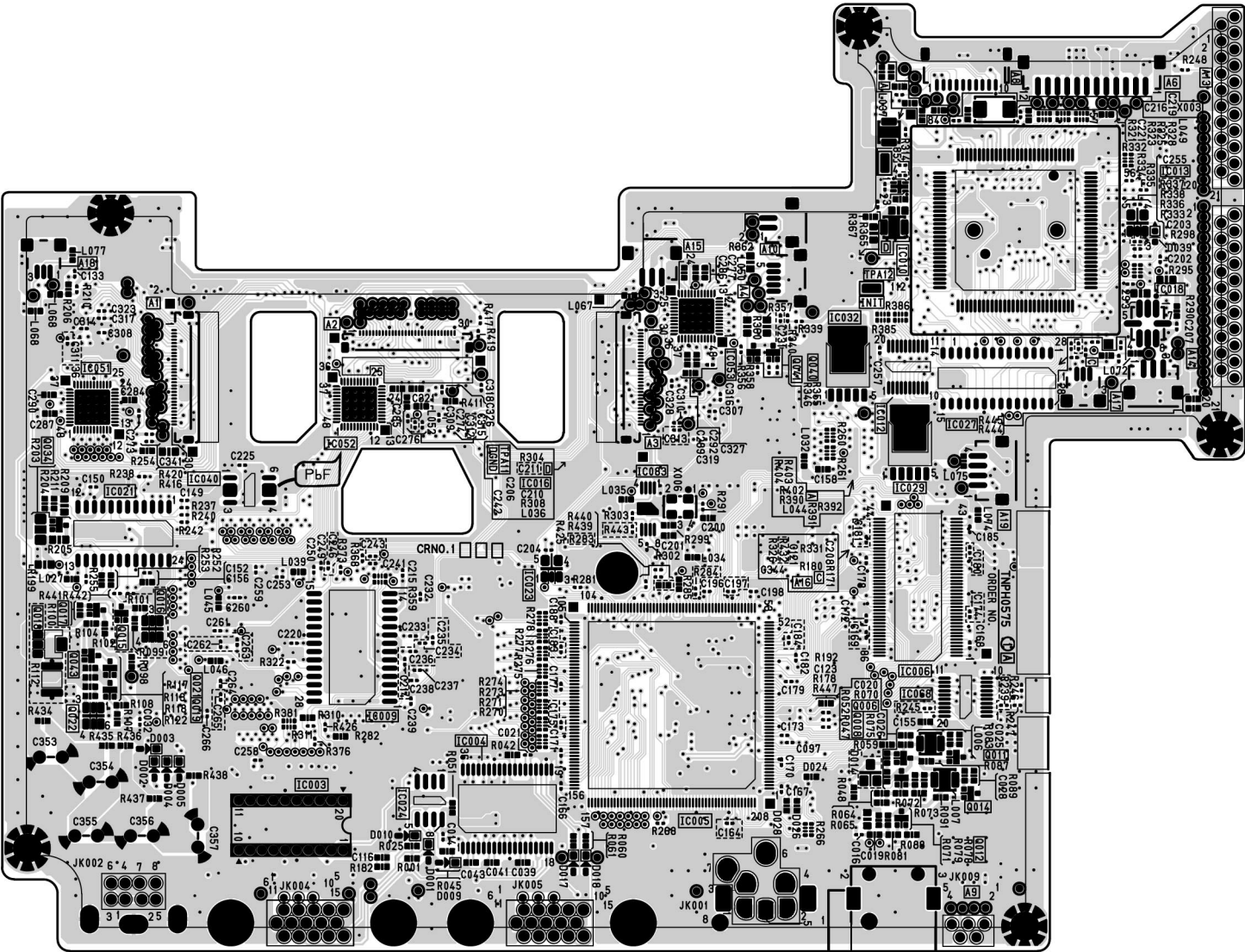


A-P.C.Board  
(Foil Side)

TXANP01PVMZ (LB10NT\*)  
TXANP01PVNZ (LB10\*)  
TXANP01PVPZ (LB10V\*)  
TXANP01P000 (LB10S\*)

A-P.C.Board(Foil Side)									
IC				TRANSISTOR				TP	
IC1003	A-2	IC1023	B-3	Q1006	B-4	Q1022	B-1	TPA11	C-3
IC1004	A-2	IC1024	A-2	Q1008	A-4	Q1034	B-1	TPA12	C-4
IC1005	B-3	IC1027	C-4	Q1011	A-4	Q1040	C-4		
IC1006	B-4	IC1029	B-4	Q1012	A-4	Q1041	C-4		
IC1009	B-2	IC1032	C-4	Q1014	A-4	Q1043	B-1		
IC1010	C-4	IC1040	B-2	Q1015	B-1				
IC1012	C-4	IC1051	C-1	Q1016	B-1				
IC1013	C-5	IC1052	C-2	Q1017	B-1				
IC1016	B-3	IC1053	C-3	Q1018	B-1				
IC1018	C-5	IC1068	B-4	Q1019	B-1				
IC1021	B-1	IC1083	B-3	Q1021	B-1				

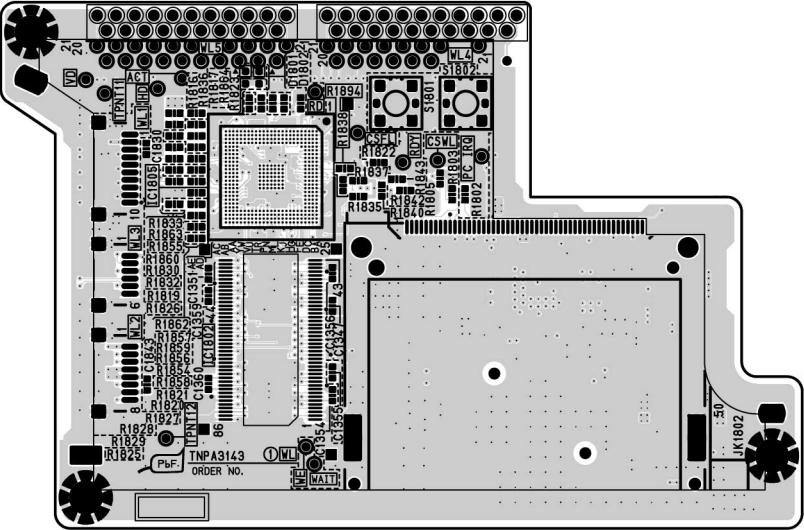
ADDRESS INFORMATION



WL-P.C.Board      TNPA3143 (LB10NT\*)  
(File Side)

WL-P.C.Board(Foil Side)			
IC		TP	
IC1802	D-7	TPA11	E-7
IC1805	E-7	TPA12	D-7

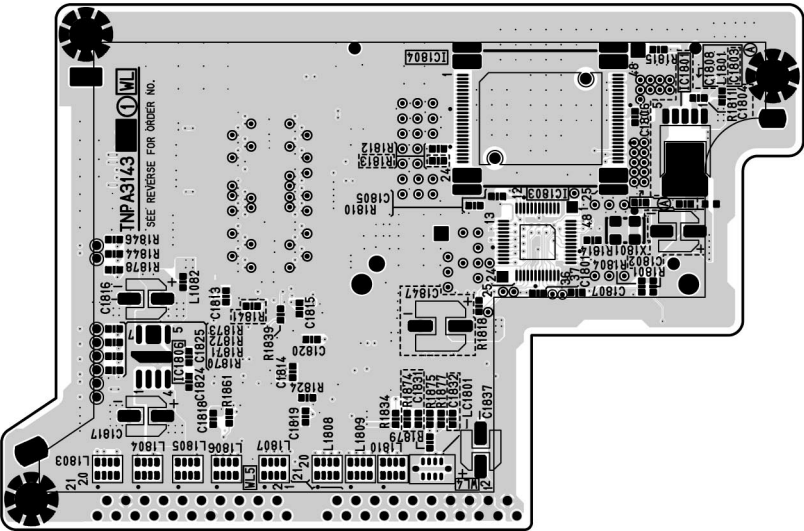
ADDRESS INFORMATION



WL-P.C.Board      TNPA3143 (LB10NT\*)  
(Component Side)

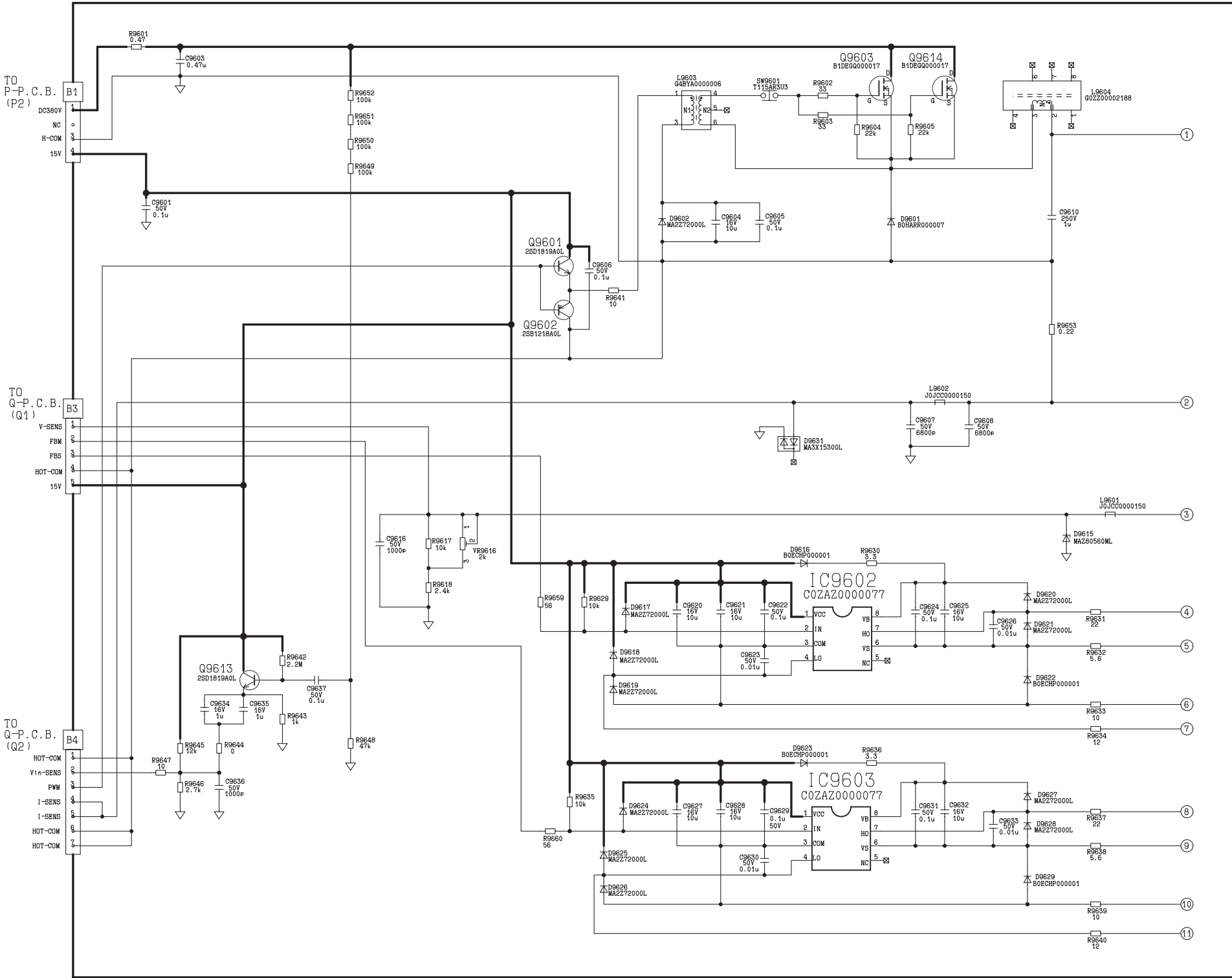
WL-P.C.Board(Component Side)			
IC			
IC1803	B-8	IC1806	A-7
IC1804	B-8		

ADDRESS INFORMATION



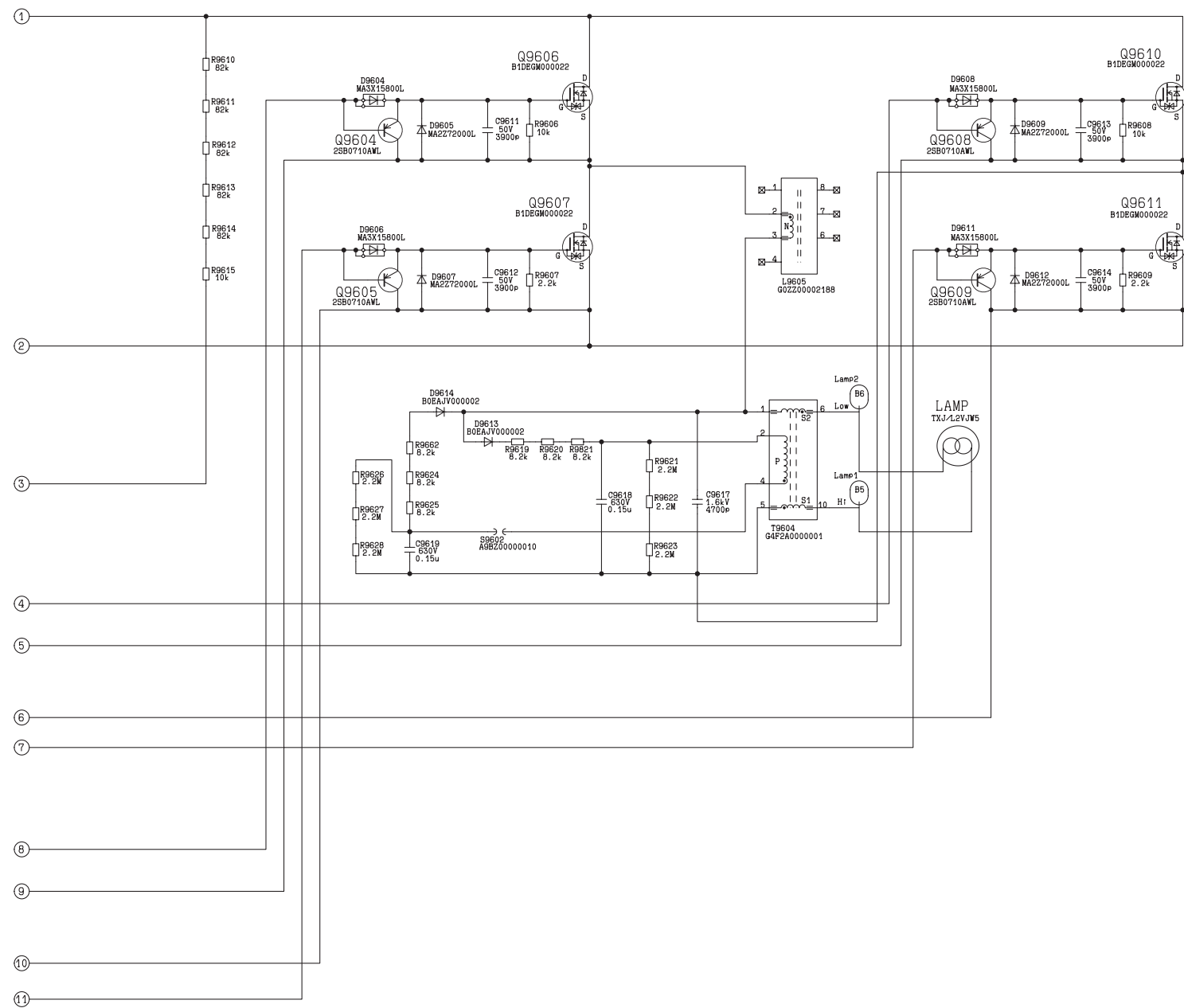
B-Module TXANP05VJW5 (1/2) Module Replacement

Only supplied components IC9602-03, Q9603-11, Q9614, D9601, D9604-09, D9611-12, D9616-29, R9601, R9630-34, R9636-40, R9653, C9603, C9610, C9617-19, T9604, SW9601, S9602, TXJ/L2VJW5



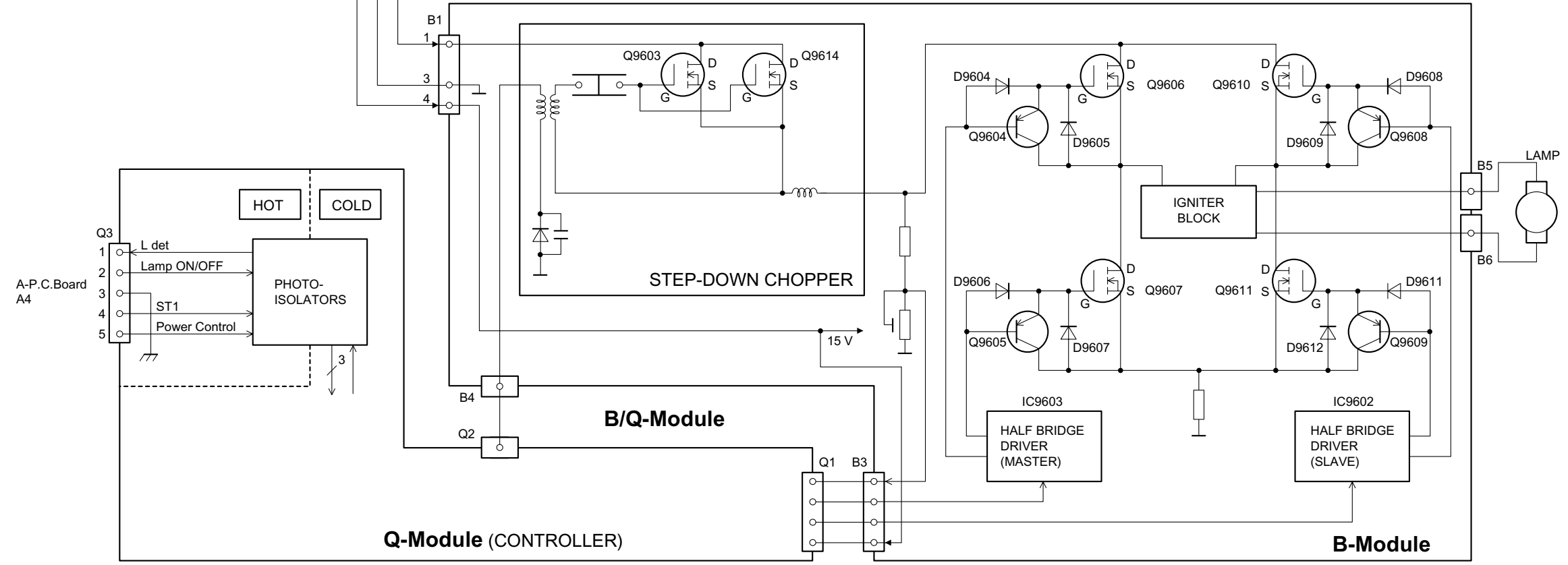
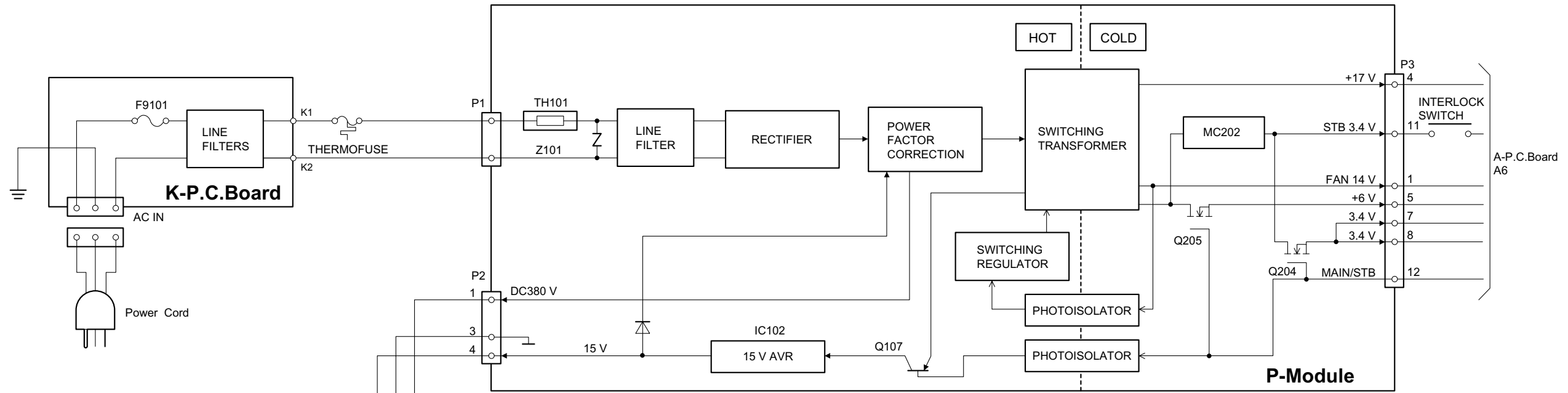
B-Module TXANP05VJW5 (2/2) Module Replacement

Only supplied components IC9602-03, Q9603-11, Q9614, D9601, D9604-09, D9611-12, D9616-29, R9601, R9630-34, R9636-40, R9653, C9603, C9610, C9617-19, T9604, SW9601, S9602, TXJ/L2VJW5



Power Supply

F  
E  
D  
C  
B  
A



1 2 3 4 5 6 7 8 9



F

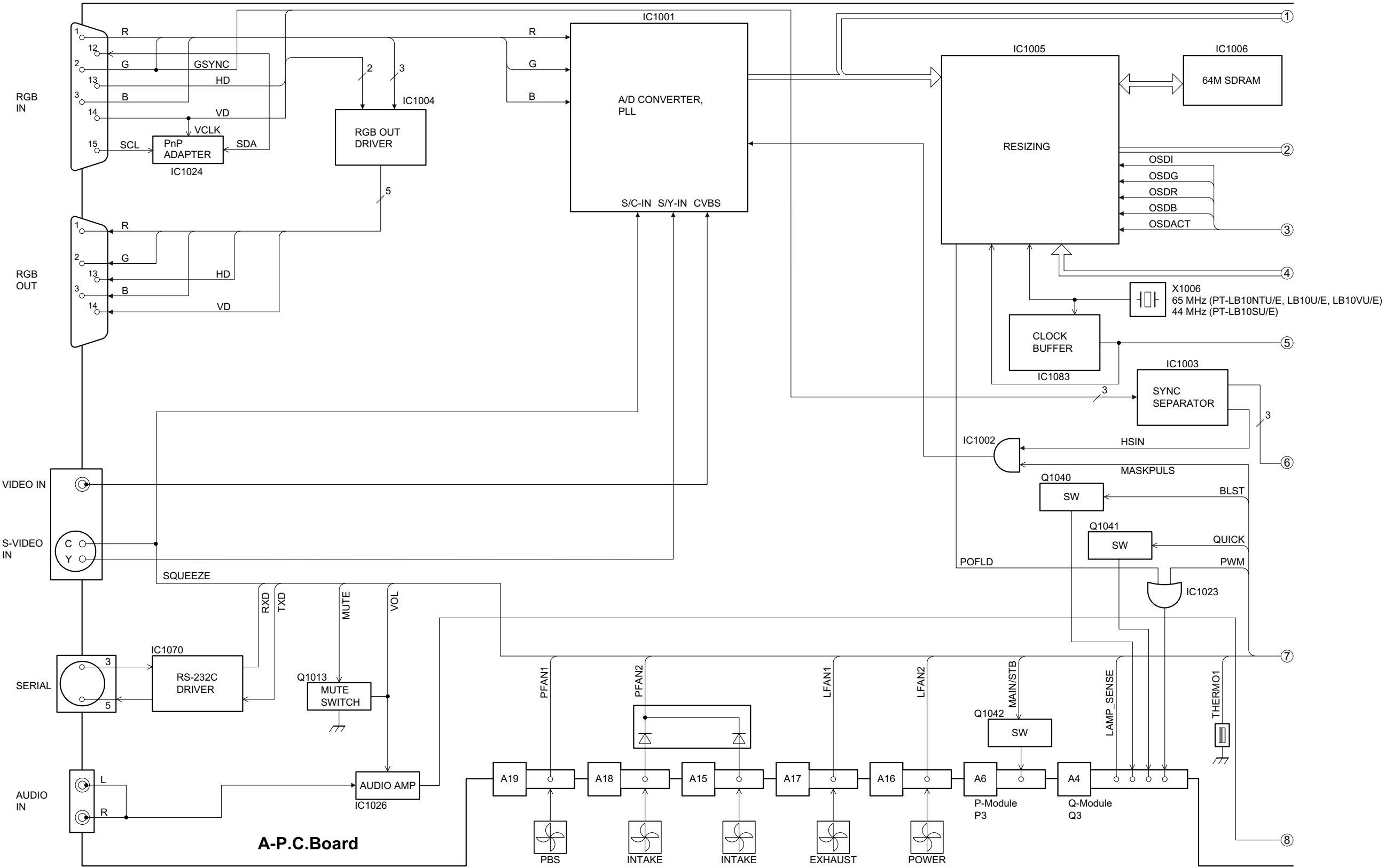
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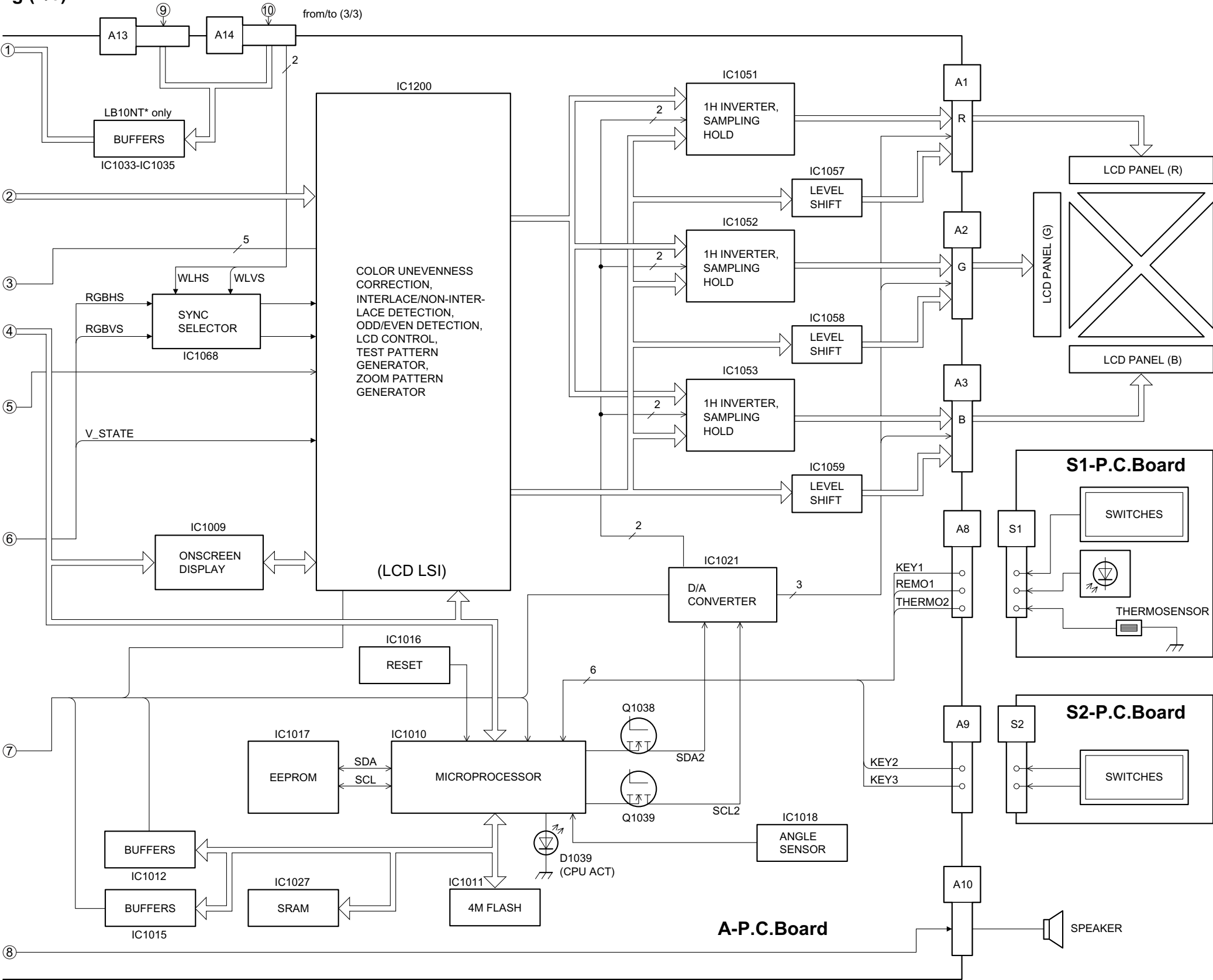
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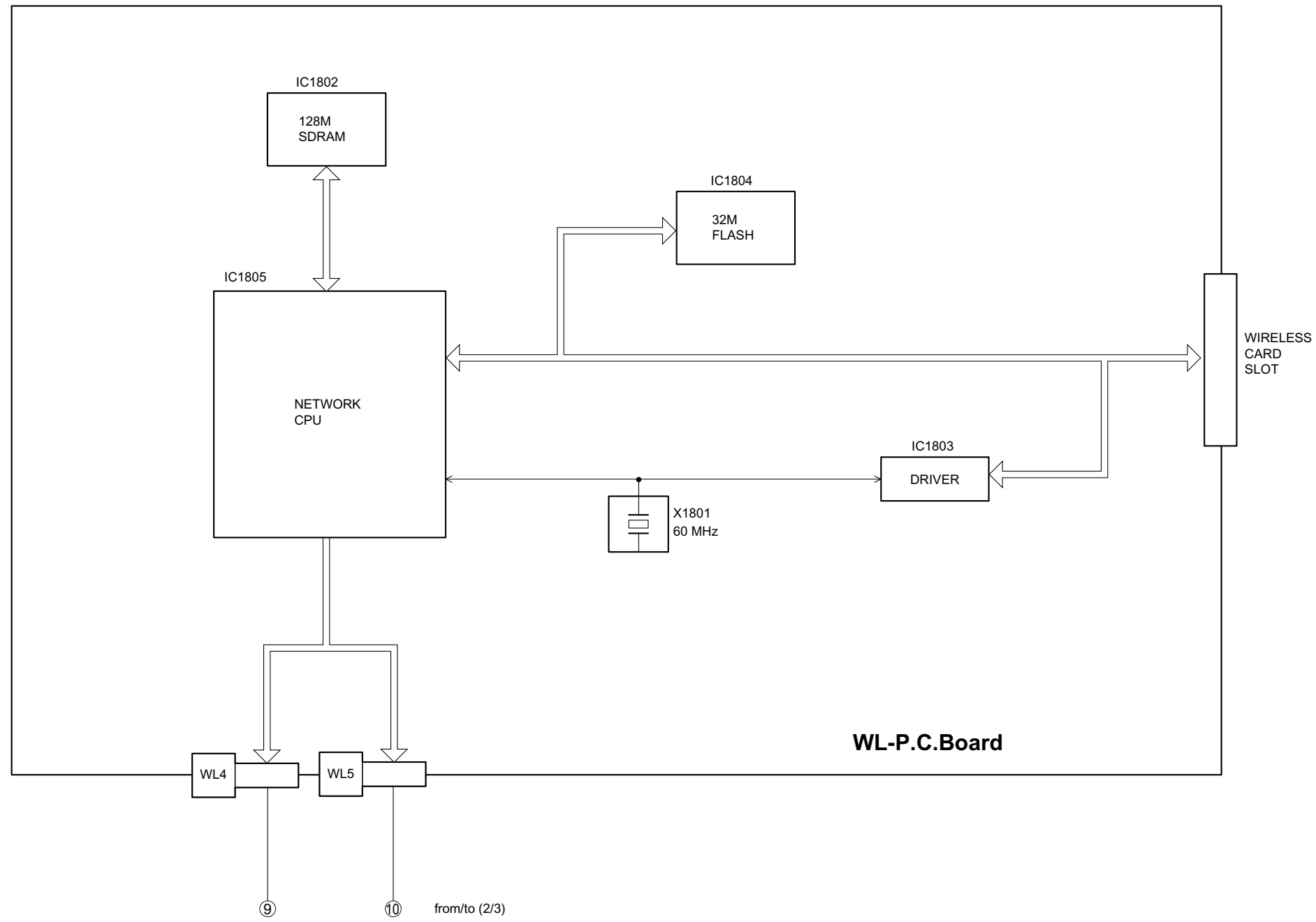
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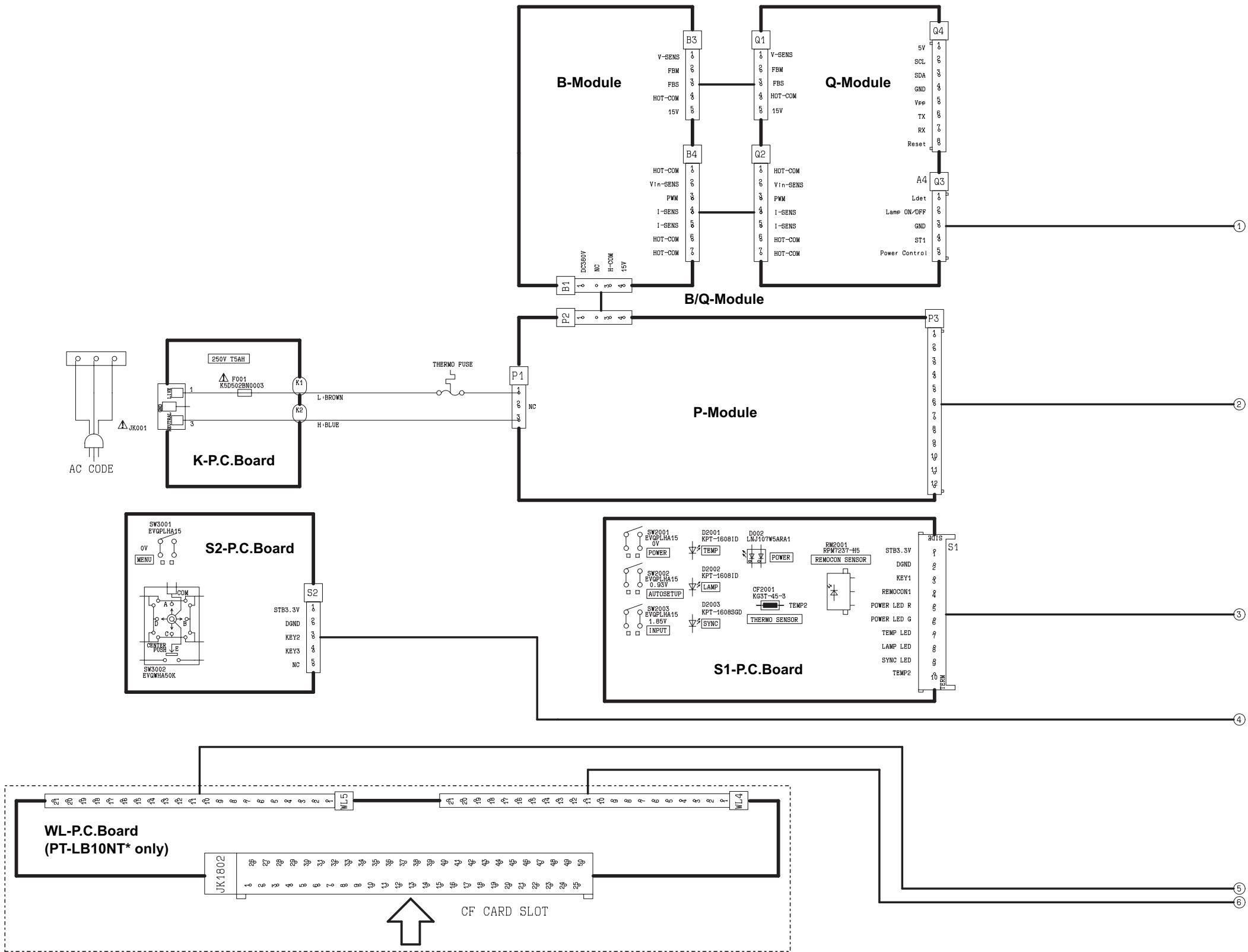
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PT-LB10NTU/E only

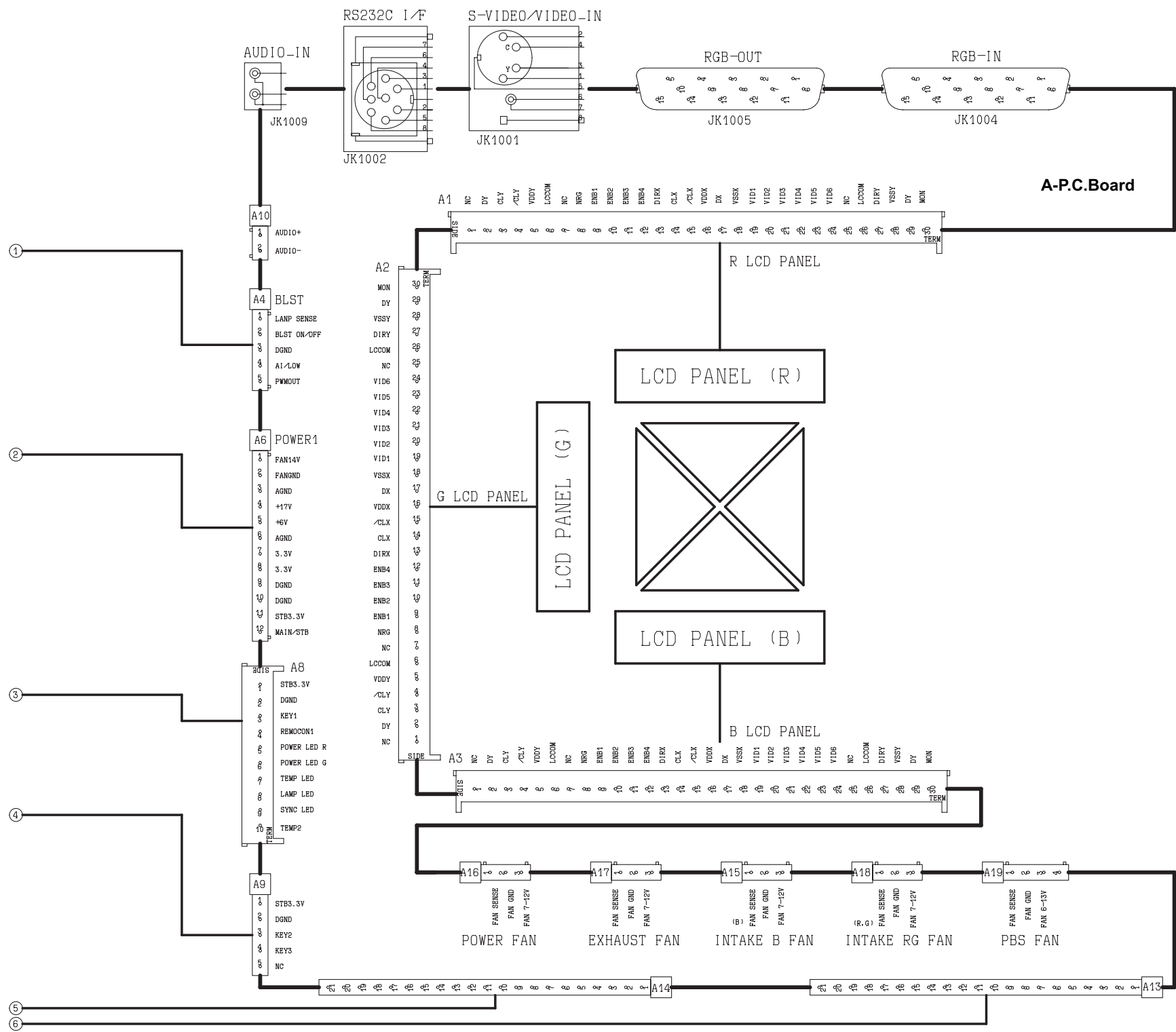


WL-P.C.Board

Interconnection Block Diagram (1/2)

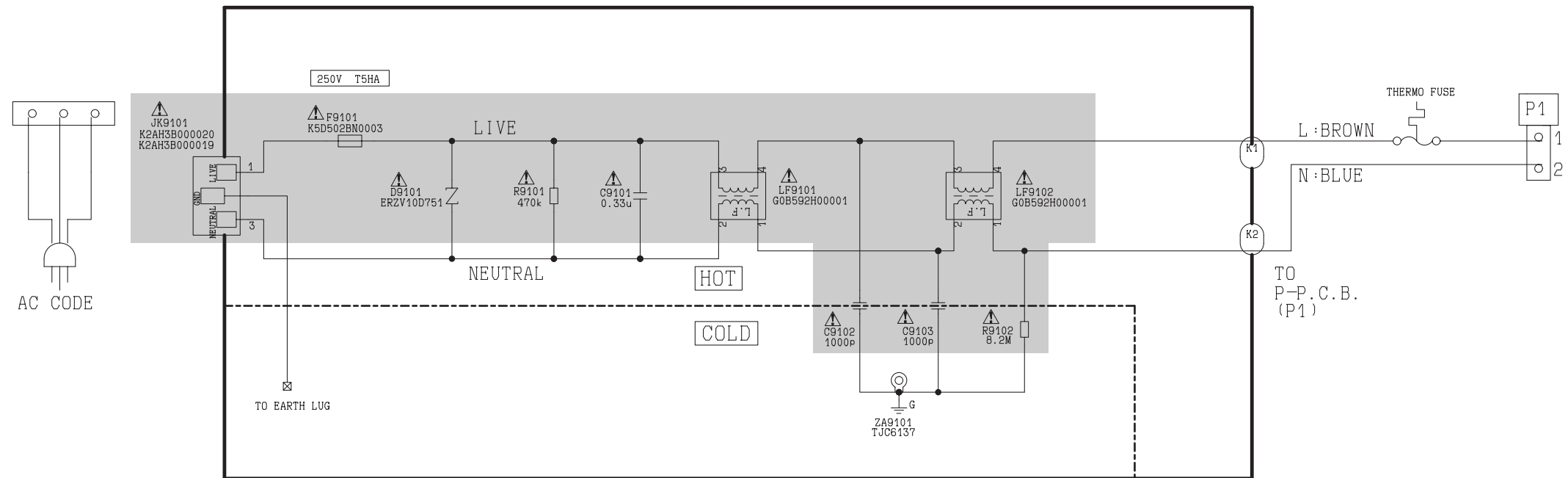


Interconnection Block Diagram (2/2)



**A**

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## Schematic Diagram for Model PT-LB10NTU/LB10U/LB10V

### IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTING YOURSELF FROM ELECTRICAL HAZARDS. WHEN SERVICING, IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL PARTS OF THE SCHEMATIC.

## Schematic Diagram for Model PT-LB10NTE/LB10E/LB10V

### Important Safety Notice

Components identified by the international symbol  have special characteristics important for safety. When replacing any of these components, use only the specified ones.





#### Notes:

##### 1. Resistor

All the resistors are carbon 1/4W resistors, unless marked as follows: The unit of resistance is an OHM [ $\Omega$ ] (K=1 000 M=1 000 000).

- |  |   |
|--|---|
|  : Nonflammable |  : Metal Oxide |
|  : Solid        |  : Metal Film  |
|  : Wire Wound   |  : Fuse        |

##### 2. Capacitor

- |  |  |
|--|--|
|  : Temperature Compensation |  : Electrolytic     |
|  : Polyester                |  : Bipolar          |
|  : Metalized Polyester     |  : Dipped Tantalum |
|  : Polypropylene          |  : Z-Type         |

##### 3. Coil

The unit of inductance is a H, unless otherwise noted.





##### 4. Test Point

-  : Test Point

##### 5. Voltage Measurement

The voltage is measured by an electronic voltmeter receiving the colorbar signal when all the customer's controls are set to the factory default.

##### 6. Color code for the links between diagrams and circuit boards

From/To		To/From	Color code
Block diagram		Schematic diagram	Magenta
Schematic diagram		Schematic diagram	Green
Schematic diagram		Circuit boards	Yellow
Schematic diagram		Waveforms	Cyan (Light blue)

##### 7. HOT and COLD indications

The power circuit board contains a circuit area using a separate power supply to isolate the ground connection. The circuit is a HOT and COLD circuit. Take the precautions below:

##### 8. This schematic diagram is the latest at the time of printing and the subject to change without notice.

#### Precautions:

1. NEVER touch the HOT part or the HOT and COLD parts at the same time, or you may get an electric shock.
2. NEVER short-circuit the HOT and COLD circuits, or the fuse may blow and the parts may break.
3. NEVER connect an instrument such oscilloscope to the HOT and COLD circuit simultaneously, or the fuse may blow. Connect the ground of the instrument to the ground of the chassis.
4. MAKE SURE to unplug the power cord from the power outlet before removing the chassis.



## LB10U/LB10VU/LB10SU

Notice

IMPORTANT FOR PROTECTION FROM FIRE AND ELECTRICAL SHOCK

USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF

## LB10E/LB10VE/LB10SE

Notice

When replacing any of these components, use only the manufacturer's

IM [ $\Omega$ ] (K=1 000 M=1 000 000).

Manufacturer's controls are set to the standard condition.

connection. The circuit is defined by HOT and COLD indications in the schematic

notice.

Electric shock.

may blow. Connect the ground of instruments to the ground of the circuit being measured.



**F**

**F**

## D

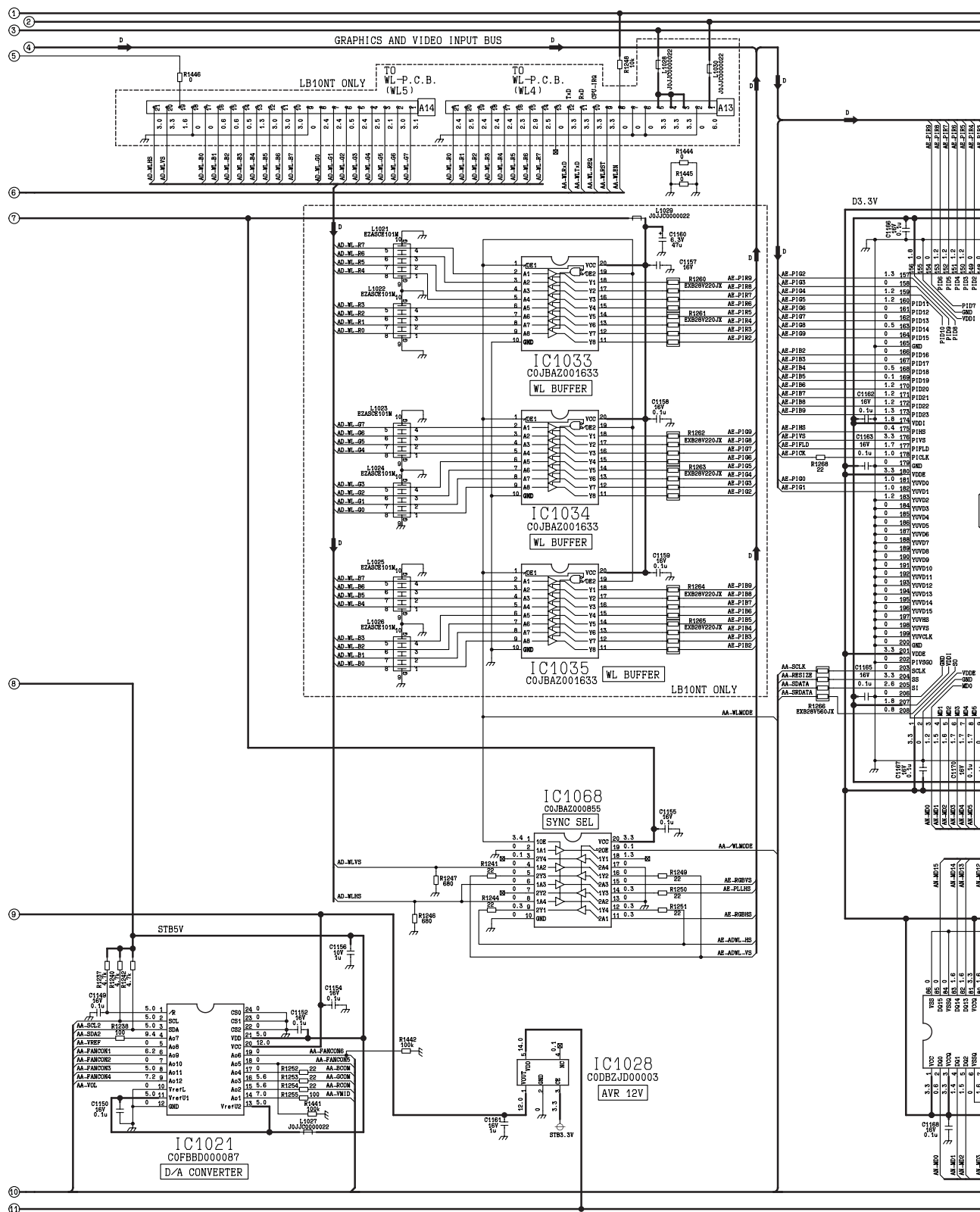
## C

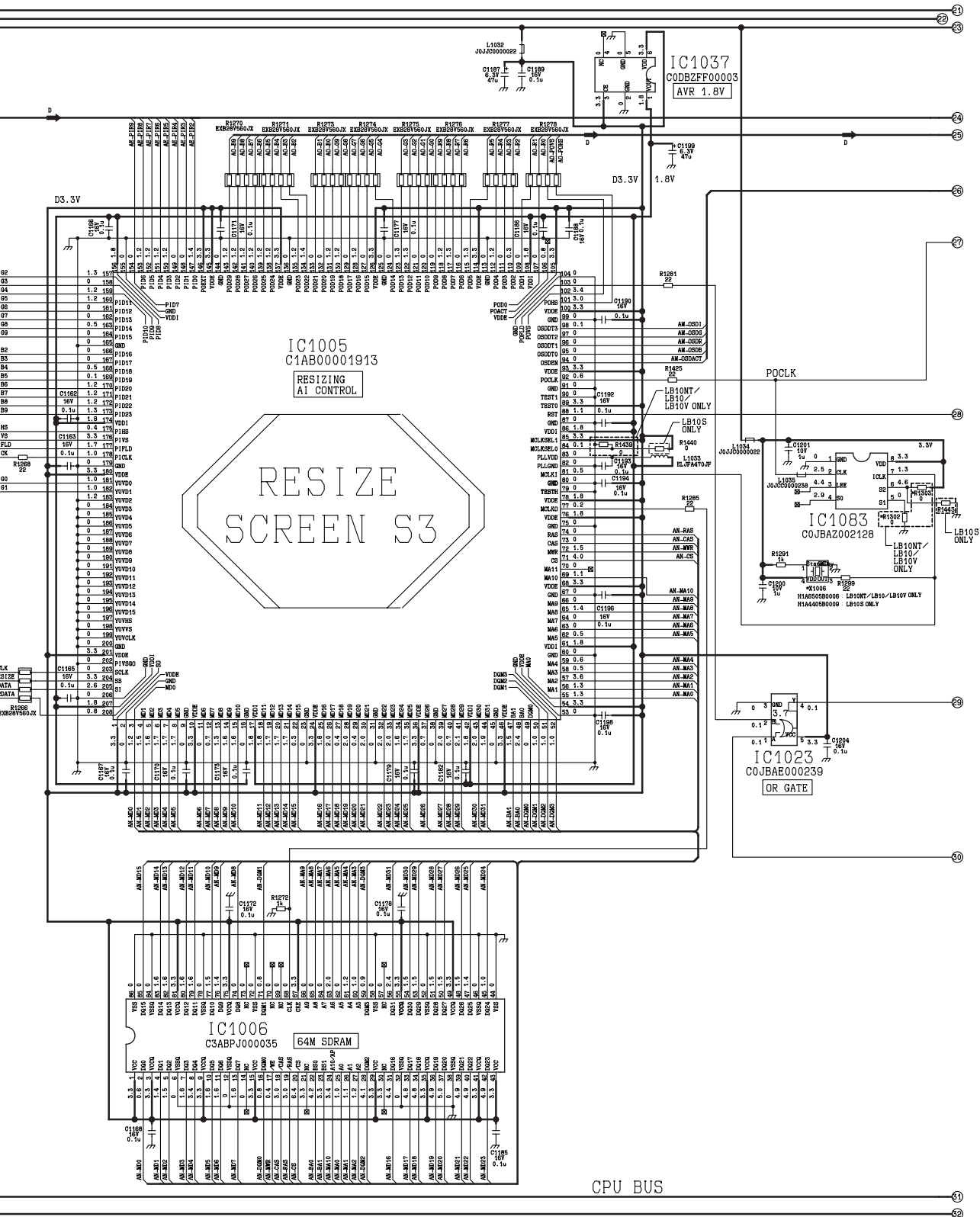


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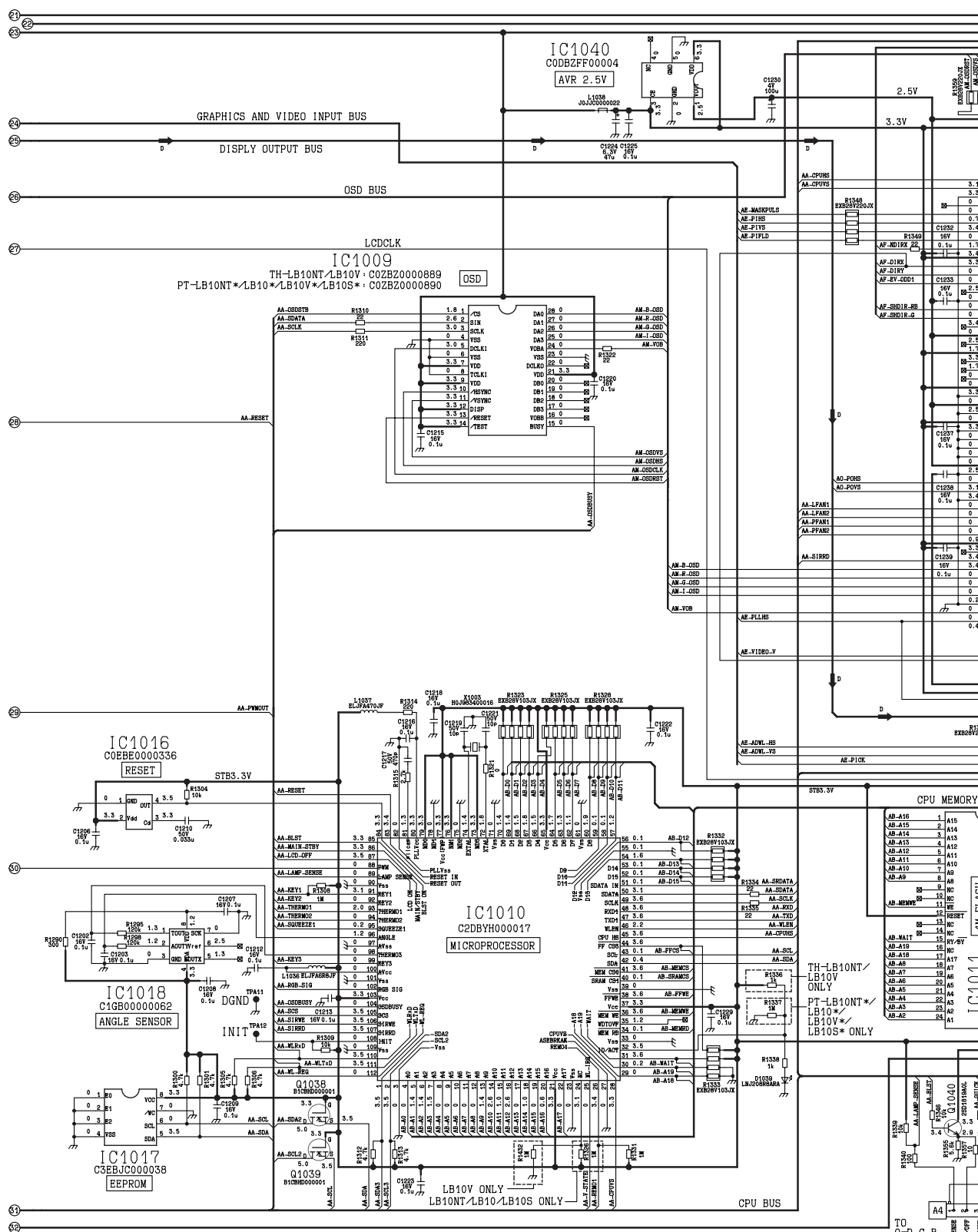


**TXANP01PVNZ (LB10\*)**  
**TXANP01PXAZ (LB10S\*)**





**TXANP01PVNZ (LB10\*)**  
**TXANP01PXAZ (LB10S\*)**

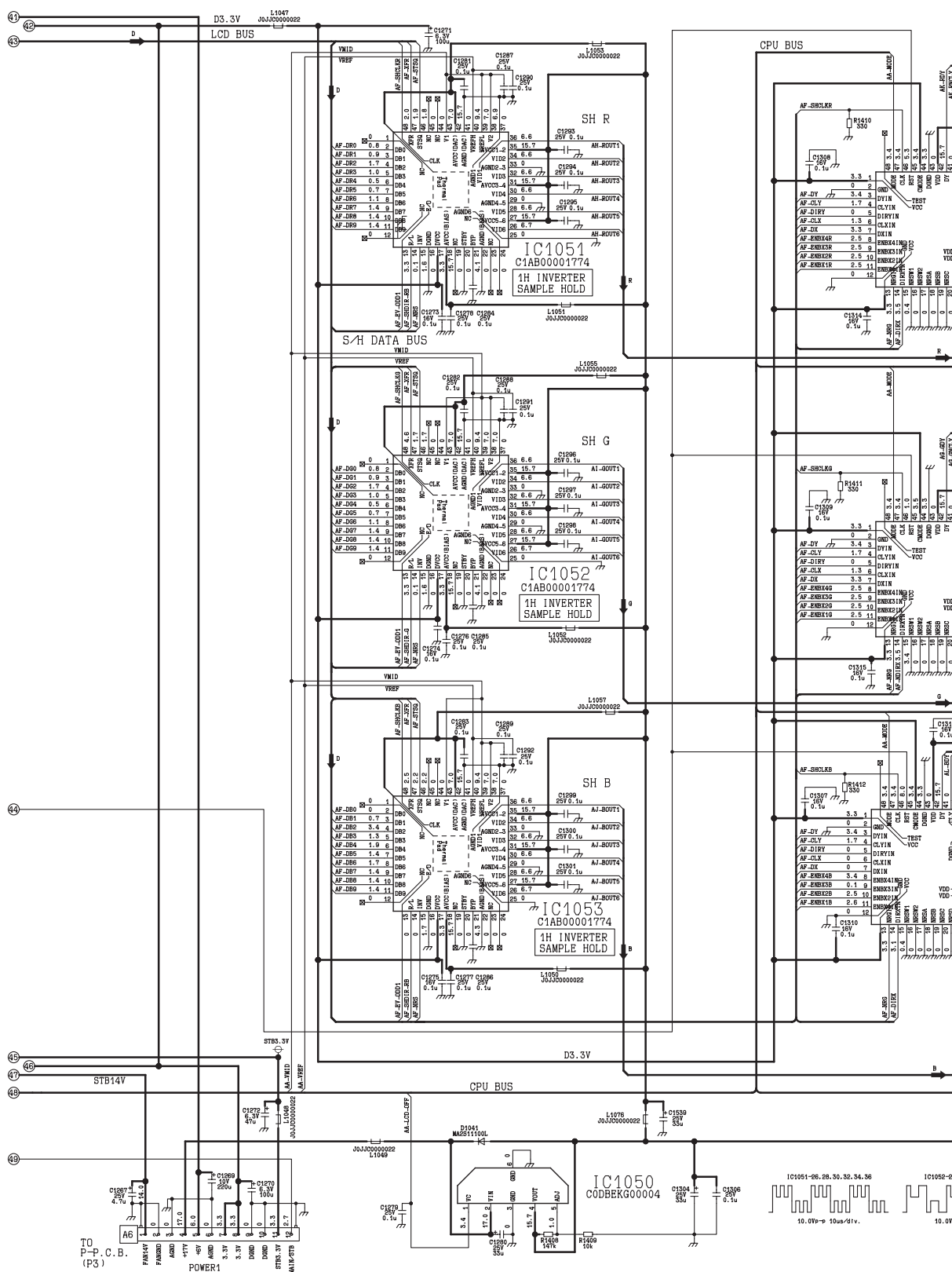








**TXANP01PVNZ (LB10\*)**  
**TXANP01PXAZ (LB10S\*)**







**A**

**TNPA3143 (1/2) (PT-LB10NT\*)**





# 12.6. WL-P.C.Board (2/2)

WL-P.C.Board

TNPA3143 (2/2) (PT-LB10NT\*)

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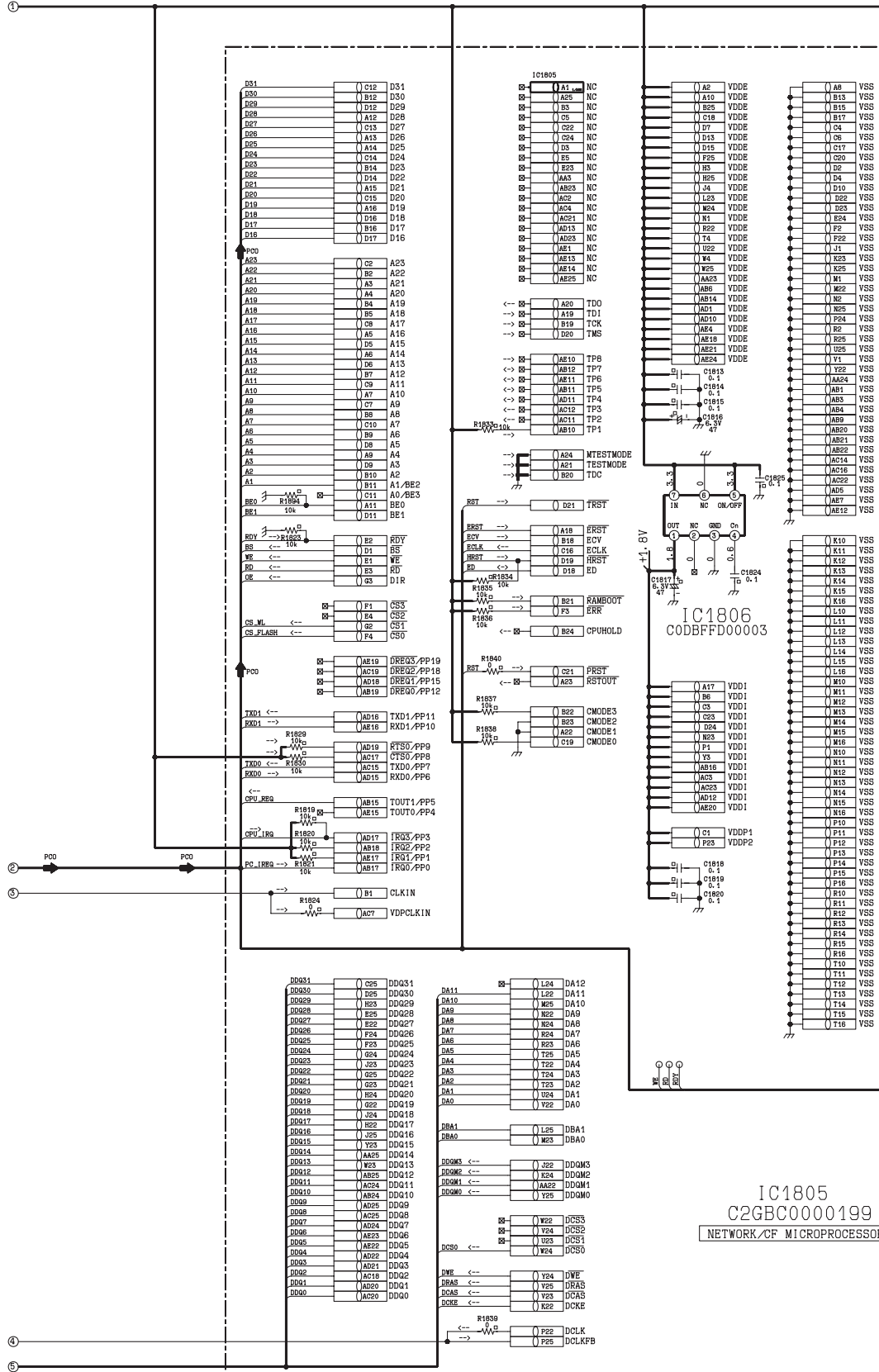
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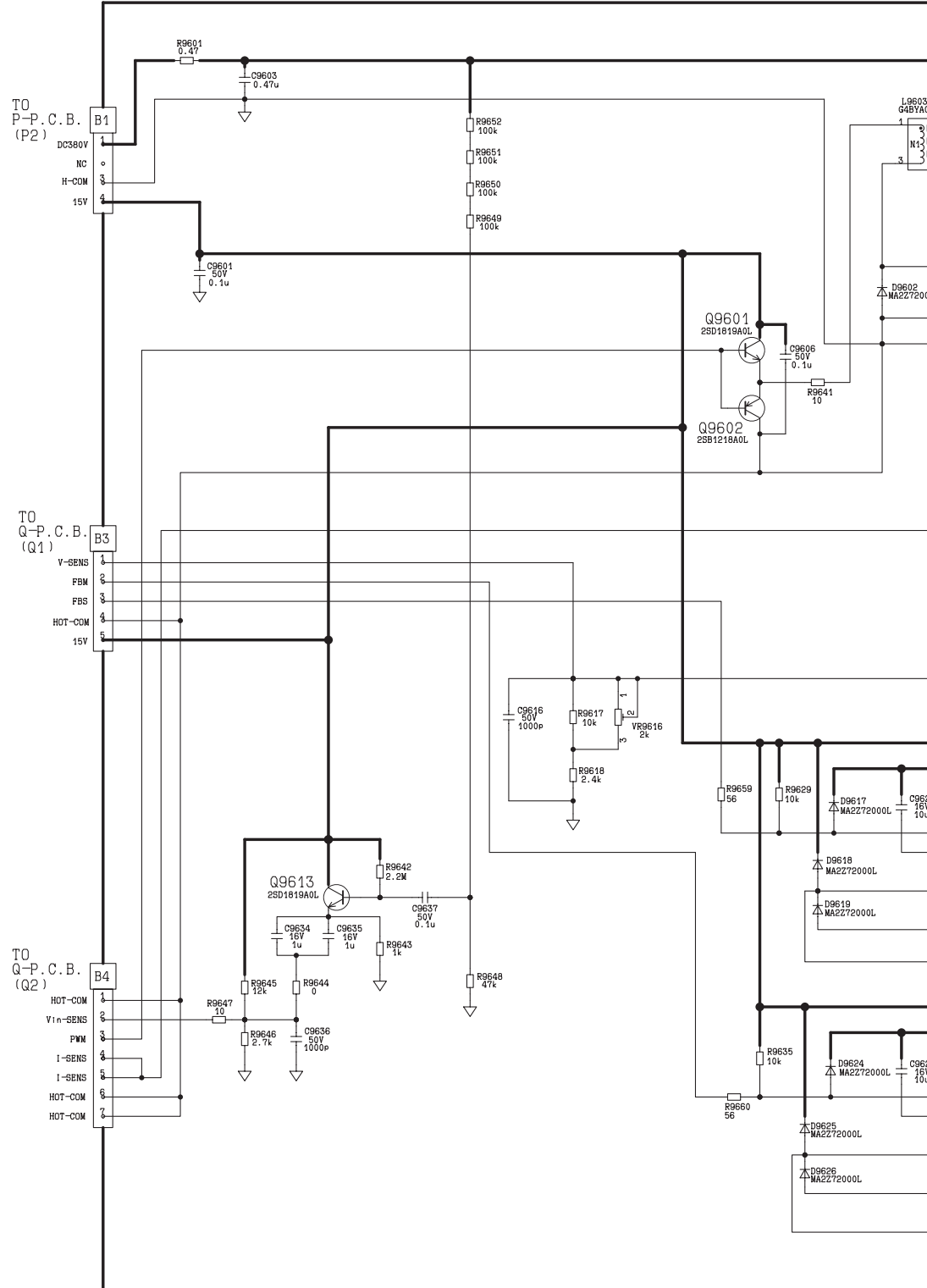


## 12.7. B-Module (1/2)

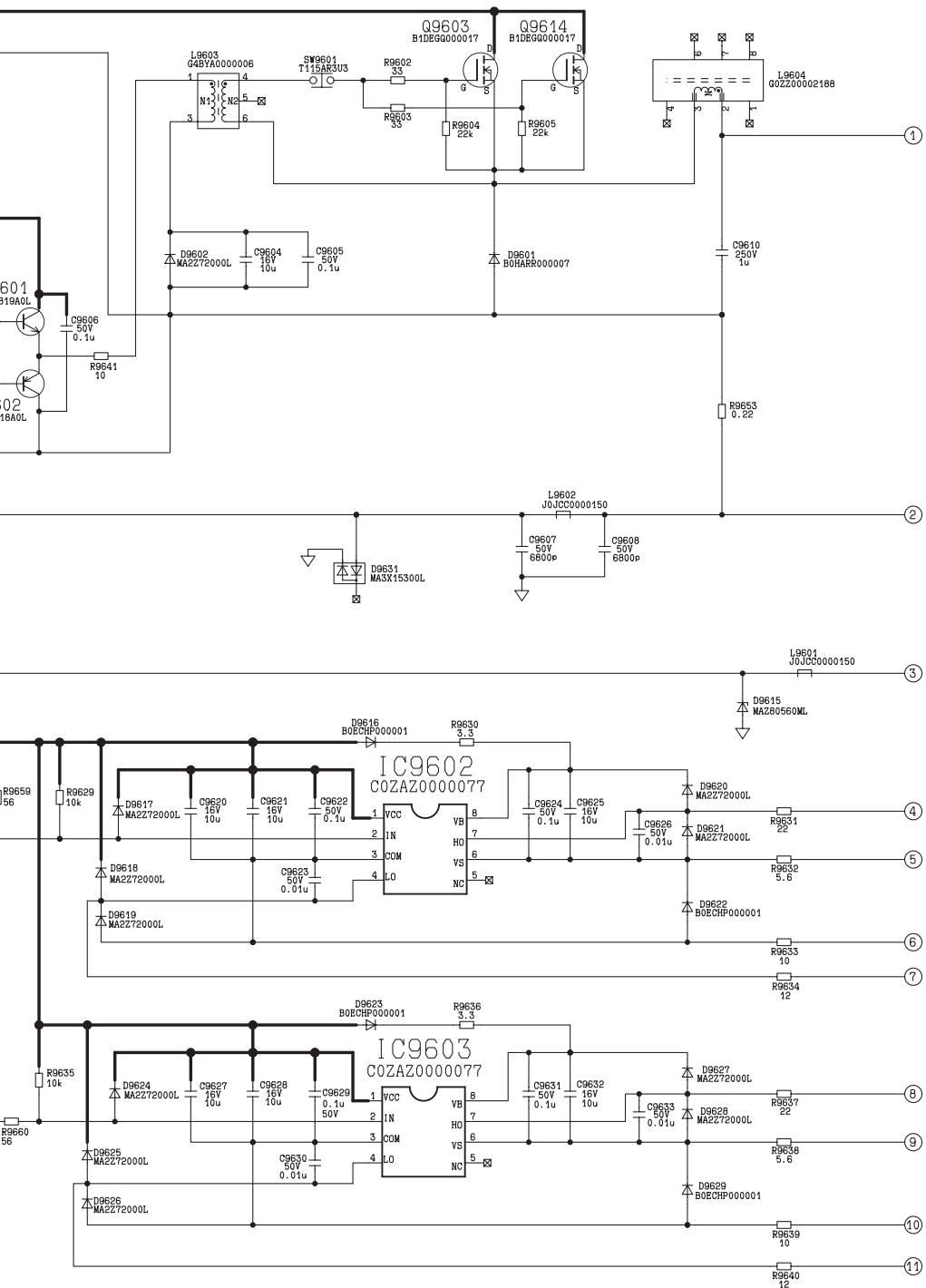


## B-Module TXANP05VJW5 (1/2) Module Replacement

Only supplied components IC9602-03, Q9603-11, Q9614, D9601, D9604-05, R9601, R9630-34, R9636-40, R9653, C9603, C9604



14, D9601, D9604-09, D9611-12, D9616-29,  
0, R9653, C9603, C9610, C9617-19, T9604, SW9601, S9602, TXJ/L2VJW5



## 12.8. B-Module (2/2)



### B-Module TXANP05VJW5 (2/2) Module Replacement

Only supplied components IC9602-03, Q9603-11, Q9614, D9601, D9604-05, D9606, D9607, D9613, D9614, D9615, D9616, D9617, D9618, D9619, D9620, D9621, D9622, D9623, D9624, D9625, D9626, D9627, D9628, D9629, D9630, D9631, D9632, D9633, D9634, D9635, D9636, D9637, D9638, D9639, D9640, D9641, D9642, D9643, D9644, D9645, D9646, D9647, D9648, D9649, D9650, D9651, D9652, D9653, D9654, D9655, D9656, D9657, D9658, D9659, D9660, D9661, D9662, D9663, D9664, D9665, D9666, D9667, D9668, D9669, D9670, D9671, D9672, D9673, D9674, D9675, D9676, D9677, D9678, D9679, D9680, D9681, D9682, D9683, D9684, D9685, D9686, D9687, D9688, D9689, D9690, D9691, D9692, D9693, D9694, D9695, D9696, D9697, D9698, D9699, D9700, D9701, D9702, D9703, D9704, D9705, D9706, D9707, D9708, D9709, D9710, D9711, D9712, D9713, D9714, D9715, D9716, D9717, D9718, D9719, D9720, D9721, D9722, D9723, D9724, D9725, D9726, D9727, D9728, D9729, D9730, D9731, D9732, D9733, D9734, D9735, D9736, D9737, D9738, D9739, D9740, D9741, D9742, D9743, D9744, D9745, D9746, D9747, D9748, D9749, D9750, D9751, D9752, D9753, D9754, D9755, D9756, D9757, D9758, D9759, D9760, D9761, D9762, D9763, D9764, D9765, D9766, D9767, D9768, D9769, D9770, D9771, D9772, D9773, D9774, D9775, D9776, D9777, D9778, D9779, D9780, D9781, D9782, D9783, D9784, D9785, D9786, D9787, D9788, D9789, D9790, D9791, D9792, D9793, D9794, D9795, D9796, D9797, D9798, D9799, D9800, D9801, D9802, D9803, D9804, D9805, D9806, D9807, D9808, D9809, D9810, D9811, D9812, D9813, D9814, D9815, D9816, D9817, D9818, D9819, D9820, D9821, D9822, D9823, D9824, D9825, D9826, D9827, D9828, D9829, D9830, D9831, D9832, D9833, D9834, D9835, D9836, D9837, D9838, D9839, D9840, D9841, D9842, D9843, D9844, D9845, D9846, D9847, D9848, D9849, D9850, D9851, D9852, D9853, D9854, D9855, D9856, D9857, D9858, D9859, D9860, D9861, D9862, D9863, D9864, D9865, D9866, D9867, D9868, D9869, D9870, D9871, D9872, D9873, D9874, D9875, D9876, D9877, D9878, D9879, D9880, D9881, D9882, D9883, D9884, D9885, D9886, D9887, D9888, D9889, D9890, D9891, D9892, D9893, D9894, D9895, D9896, D9897, D9898, D9899, D9900, D9901, D9902, D9903, D9904, D9905, D9906, D9907, D9908, D9909, D9910, D9911, D9912, D9913, D9914, D9915, D9916, D9917, D9918, D9919, D9920, D9921, D9922, D9923, D9924, D9925, D9926, D9927, D9928, D9929, D9930, D9931, D9932, D9933, D9934, D9935, D9936, D9937, D9938, D9939, D9940, D9941, D9942, D9943, D9944, D9945, D9946, D9947, D9948, D9949, D9950, D9951, D9952, D9953, D9954, D9955, D9956, D9957, D9958, D9959, D9960, D9961, D9962, D9963, D9964, D9965, D9966, D9967, D9968, D9969, D9970, D9971, D9972, D9973, D9974, D9975, D9976, D9977, D9978, D9979, D9980, D9981, D9982, D9983, D9984, D9985, D9986, D9987, D9988, D9989, D9990, D9991, D9992, D9993, D9994, D9995, D9996, D9997, D9998, D9999, D10000

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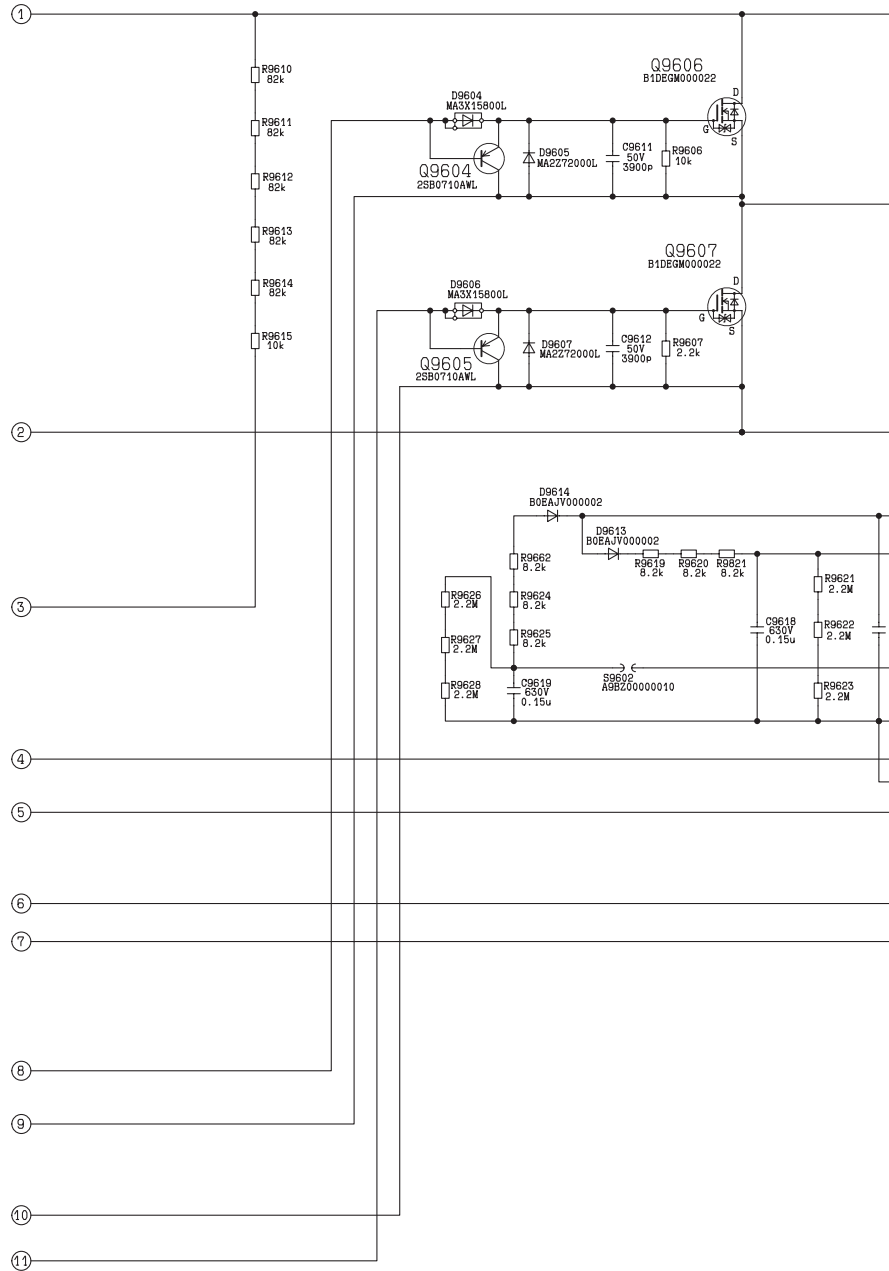
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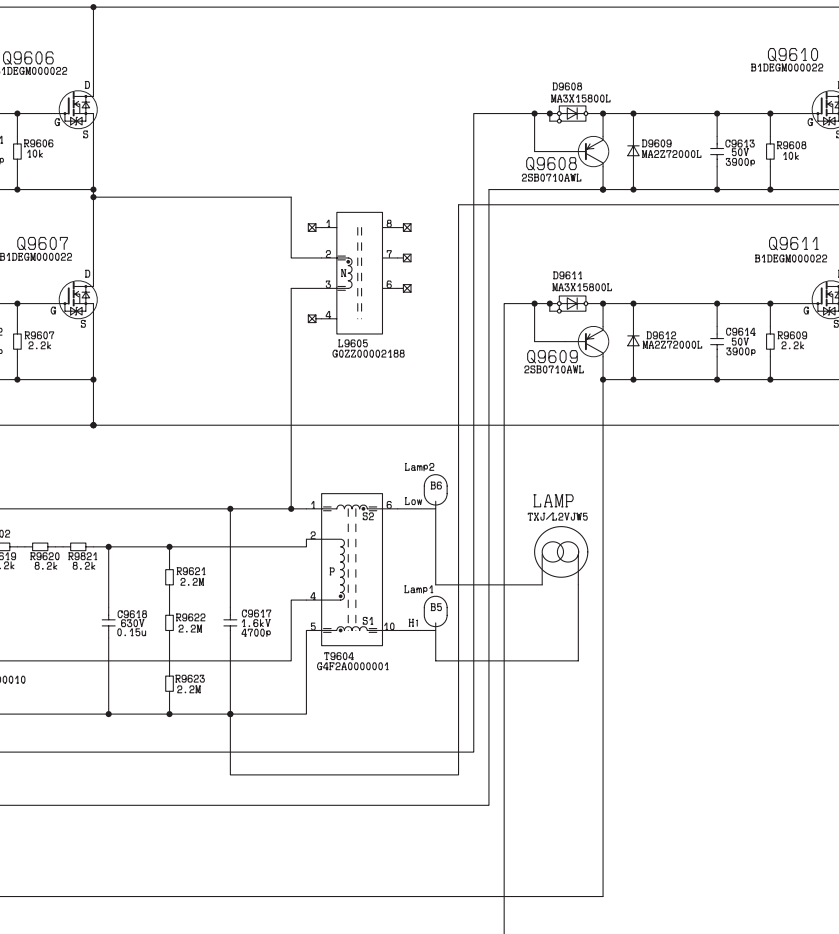
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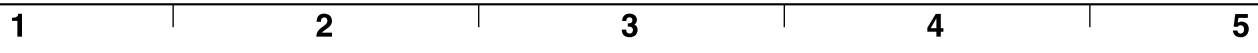


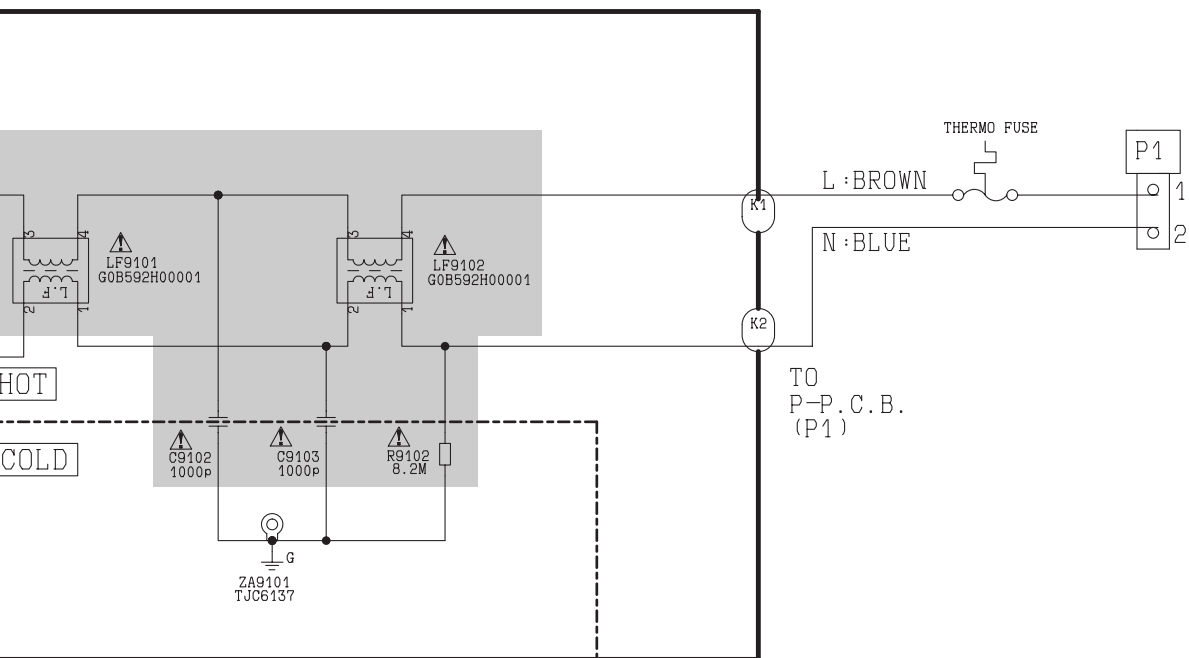
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0, R9653, C9603, C9610, C9617-19, T9604, SW9601, S9602, TXJ/L2VJW5





TXANP03VJW5





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## S2-P.C.Board TNPA3145

